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OCCUPATIONAL WAGE RELATIONSHIPS

COTTON TEXTILES

1946

SERIES I
NO. 9



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BUREAU OF LABOR STATISTICS

**WAGE ANALYSIS BRANCH
INDUSTRY WAGE STUDIES DIVISION
HARRY OBER, CHIEF**

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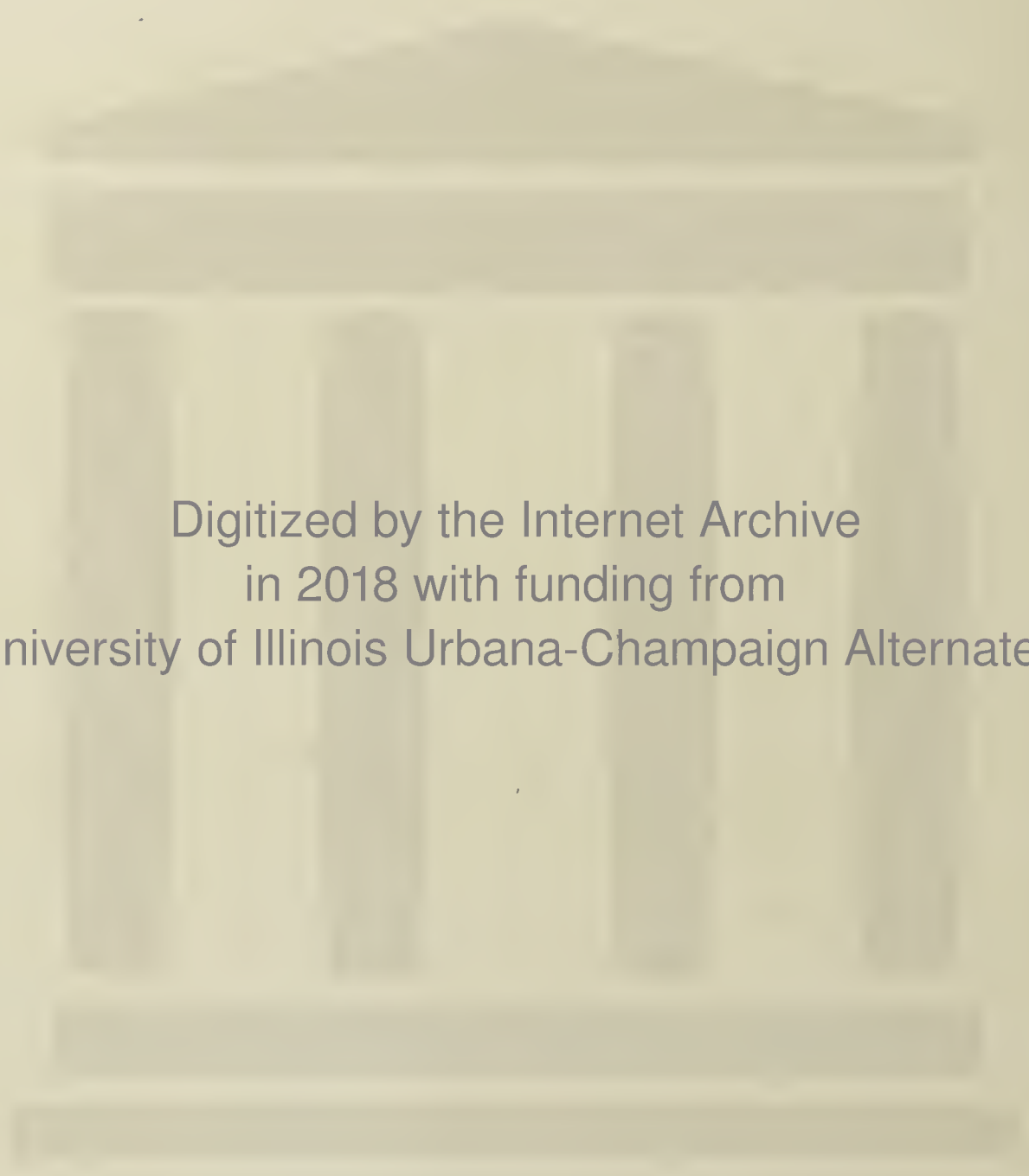
PREFACE

The Industry Wage Study program of the Bureau of Labor Statistics is designed to yield a variety of wage data for use in collective bargaining, wage determination, placement, and minimum wage administration.

The results of the Industry Wage Studies are made available in two series of bulletins. Series 1, entitled "Occupational Wage Relationships", provides measures of prevailing wage relationships among key occupations in each industry. Series 2 on "Wage Structure" is devoted to an analysis of actual hourly earnings (straight-time) and the various elements that influence variations in wages, such as location, size of establishment, and method of wage payment. This series also presents information relating to the occupational composition of the industry's labor force and such practices as shift differential payments, paid vacations, paid lunch periods, nonproduction bonuses, insurance, sick leave, and incentive wage systems. Locality tabulations (forms OIR-17 and 18) are available in the regional offices of the Bureau.

This bulletin is ninth in the Occupational Wage Relationship series. Similar studies for the rayon and silk, woolen and worsted, and dyeing and finishing industries are in preparation.

June 1947



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OCCUPATIONAL WAGE RELATIONSHIPS IN THE COTTON TEXTILE INDUSTRY
APRIL-MAY 1946 1/

CHARACTERISTICS OF COTTON TEXTILE MILLS

The manufacture of textile products is divided into a large number of operations. Continuous processing or the automatic transfer of yarn or cloth from one machine to the next in line prevails to only a limited extent. As a result, each machine or operation generally has an operator, usually designated by a title descriptive of the operation or the machine. Because of the general occurrence of the key operations in most plants and the fact that the particular operations frequently require special aptitudes or training, many of these operations have evolved into definite jobs that are clearly differentiated and easily identified.

Despite the large number of jobs, it is convenient to make a complete break in textile mill operations at only two points: at the conclusion of the spinning process, at which time the yarn is wound on cones or spools, and at the conclusion of the weaving process, before the transfer to dyeing and finishing departments or plants. Individual mills may, therefore, consist of any of these three general divisions alone or in combination. The typical cotton textile mill is an integrated establishment combining the spinning and weaving departments. Some of these integrated mills also have finishing departments and others do a limited amount of simple dyeing. The typical plant produces a relatively standard type of cloth, such as sheetings, twills, drills, duck, tire cord, or print cloth. In lesser quantities there appear other fabrics such as gingham, chambray, napped goods, gauze or toweling. Although some large establishments produce a variety of goods, most mills have found it advantageous to limit their output to only a few related items. A number of cotton mills are also producing fabrics comprised wholly or in part of spun rayon.

Somewhat smaller in total employment and largely confined to the Southeast are cotton yarn (spinning) mills which sell yarn to weaving mills or to plants knitting seamless hosiery or underwear fabrics. Some of the yarn mills produce combed yarn which has gone through an additional preparation process in which the shorter fibers are removed, resulting in a yarn which is stronger and of better appearance.

Most of the independent weaving mills are found in New England and the Middle Atlantic States with only a small number in the Southeast. Such mills usually produce the less common types of cloth, such as plush or upholstery fabrics, which may require several varieties of yarn.

1/ Prepared by Alan L. Ritter in the Bureau's Atlanta office. Another bulletin, "Wage Structure: Cotton Textiles, 1946", presents detailed data relating to actual hourly earnings.

There are deviations, of course, from these general classifications. Some integrated mills do not maintain an exact balance between spinning and weaving departments and may sell or buy yarn as a result. The tendency toward the operation of multiple plants under one management has resulted in the increased integration of production under a given company, although separate processes may still be carried on in individual establishments.

OCCUPATIONAL WAGE RELATIONSHIPS IN COTTON TEXTILE MILLS

For a number of years the Bureau of Labor Statistics has made periodic studies of wage rates and wage practices in the cotton textile industry. The results of the latest study, based upon an April-May 1946 pay-roll period, form the basis for this article. Three types of mills-- integrated establishments, independent yarn, and independent weaving mills-- were included in this study. Dyeing and finishing departments connected with integrated establishments were included, but independent dyeing and finishing plants were not included.

Almost all cotton textile mills have formal rate structures with rates for individual jobs based roughly upon the relative amounts of skill and responsibility required. Although there are variations among mills for particular jobs because of differences in equipment or in the type of product manufactured, each mill recognizes a definite pattern of occupational wage relationships. A number of textile jobs are commonly paid on an incentive basis, usually at piece rates. These too are fitted into the wage pattern of each plant although it is frequently necessary to establish a number of rates for each operation to accommodate variations in product. 2/

In preparing the data for the study of wage relationships, the average earnings of workers in selected occupations 3/ in each mill were expressed as percentages of the average earnings of men janitors in the respective mills. Separate computations were made for men and women workers and for time and incentive workers in each occupation. Thus, the pattern of rates in each mill was related to an appropriate base within the mill's own rate structure, and variations in wage levels among mills were eliminated. The averages (medians) of the relatives for the key occupations studied are presented, together with the range which includes one-half of the establishment relatives for each occupation. No attempt was made to adjust these averages to take account of differences in size among mills, but each establishment was given an equal weight in the positional averages. The use of the median also tends to eliminate extreme variations caused by peculiarities in certain mills which would tend to distort the general pattern of occupational relationships.

2/ The Bureau's study was limited to average hourly earnings, and information on piece rates as such was not collected.

3/ Copies of the job descriptions used to classify workers are available upon request (Job Descriptions for Wage Studies: Textiles-Appendix L).

This method of analysis, which arrays the occupational rates of each plant in relation to one established plant rate, is peculiarly adaptable to the textile industry, where considerable importance is attached to the base or minimum rate. Some operations in cotton textile mills require relatively little skill and often may be handled satisfactorily by beginners. As a result, large numbers of workers employed in such occupations as janitors, hand truckers, roving haulers, filling haulers, and battery hands receive rates at or only slightly above the minimum rate.

In order to eliminate certain cases in which the plant minimum rate was not an effective rate or applied to only a few workers, the rates for men janitors were used as establishment bases, instead of the reported minimum rates. As a result, although the rate for men janitors commonly coincided with the plant minimum rate, there were some plants in which men janitors received more than some other workers, resulting in plant occupational relatives below 100. However, as the tables indicate, there were no occupational medians below 100.

GENERAL WAGE PATTERN

The highest-paid occupations in the industry's wage scale were second hands, loom fixers, electricians, and machinists, at levels more than 50 percent above janitors (table 1 and chart 1). Men weavers on Jacquard, box, and dobby looms, and maintenance mechanics were grouped within 140 to 145 percent of the base. At a lower level within the skilled group were other maintenance occupations, women weavers, and men weavers on plain looms. Of the occupations studied, none pertaining to the initial preparation of yarn and dyeing and finishing was, on the average, at a level more than 30 percent above the lowest-skilled, even when paid on an incentive basis. The rates of pay for such groups as battery hands, roving men, filling hands, general hand truckers, and watchmen, which account for a large number of workers, approximated or were only slightly above the rates for janitors. The concentration of rates among the low-skilled is further demonstrated by the fact that the average plant earnings of workers in these groups, and in some of the other processing jobs requiring little skill, exceeded the earnings of janitors by as much as 10 percent in only one-fourth of the mills studied.

Men generally occupied higher positions in the relative wage scales than women in similar occupations. However, the occupational differentials that existed among women workers matched closely the differentials maintained among men workers, except for a dissimilarity in spread among the lowest-skilled jobs. For example, the pay differentials separating such jobs as janitors, battery hands, card tenders, and inspectors (hand and machine) were slightly wider for men than for women, but these differences were too slight to have much significance if translated into money terms.

Incentive workers appeared at substantially higher levels in the average wage scale than time workers in the same occupations. The relative advantage of incentive workers over time workers differed among the jobs in which both methods of wage payment were widely used, hence the ranking of occupations and the differentials among occupations likewise differed as between occupations paid on a time basis and those paid according to output.

REGIONAL VARIATIONS IN WAGE RELATIONSHIPS.

Within the cotton textile industry there is considerable interest in comparing Northern and Southern wage scales. There are sufficiently large and homogeneous concentrations of textile mills in New England and the Southeast to permit valid comparisons between those two regions (table 2). Data for the textile mills in the Middle Atlantic States and in the Southwest are included in the national tabulations, but they are not shown separately.

The low-skilled jobs were clustered within a narrower range in Southern than in New England wage scales. The spread above the level of the low-skilled was greater in New England than in Southern wage scales for most of the semi-skilled occupations and all of the skilled occupations studied. In relation to janitors and to the rest of the occupations, loom fixers (other than Jacquard), carpenters, slasher tenders, and slubber tenders on incentive were rated considerably higher in New England than in Southern mills, while the opposite was true for stock clerks.

These differences are brought out by a comparison of the percentages shown in table 2. Significant aspects of regional differences are not as readily apparent but are implicit in these data. With the exception of the occupations named above, there was a rather close similarity between New England and Southern wage scales in the differentials maintained among the major occupations. However, a noteworthy difference in the two scales is found in the position of the low-skilled jobs relative to all other occupations. In the framework of each region's wage level, these jobs were rated higher in the South than in New England.

WAGE RELATIONSHIPS AMONG SELECTED OCCUPATIONS IN COTTON TEXTILE MILLS BY SEX AND METHOD OF WAGE PAYMENT APRIL-MAY 1946

OCCUPATIONAL WAGE RATES AS PERCENTAGES OF RATES FOR MEN JANITORS
AVERAGE AND MIDDLE RANGE WITHIN WHICH HALF OF THE MILLS FELL

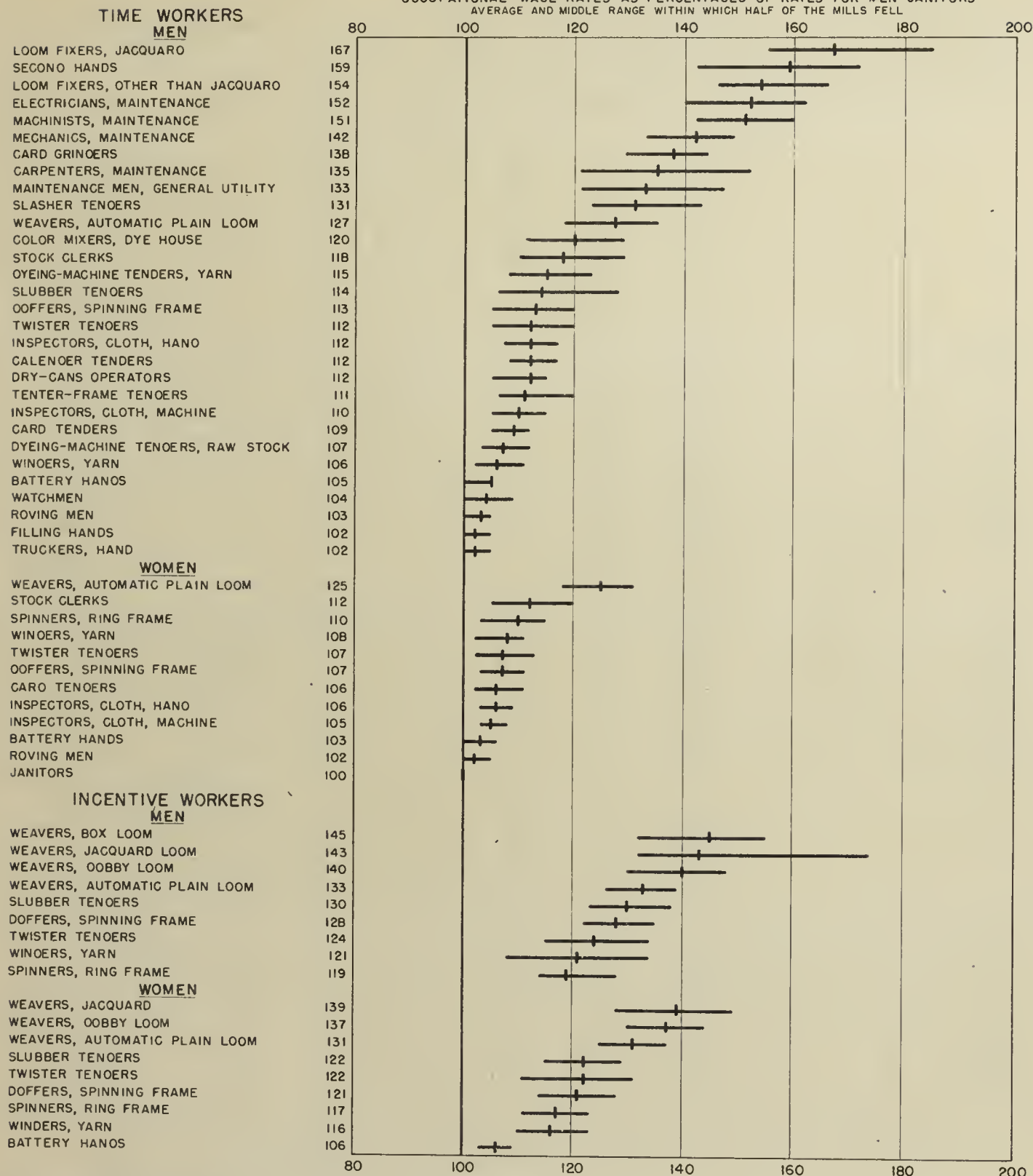


Table 1.- OCCUPATIONAL WAGE RATES ^{1/} IN COTTON TEXTILE MILLS AS PERCENTAGES OF RATES FOR MEN JANITORS,
BY SEX AND METHOD OF WAGE PAYMENT, APRIL-MAY 1946

Occupation and method of wage payment ^{2/}	Men			Women		
	Percent of rates for			Percent of rates for		
	men janitors			men janitors		
	Number of mills ^{3/}	Average half of the mills fell	Middle range: within which half of the mills fell	Number of mills ^{3/}	Average half of the mills fell	Middle range: within which half of the mills fell
<u>Maintenance</u>						
Card grinders, T.....	259	138	129-144	-	-	-
Carpenters, T.....	212	135	121-152	-	-	-
Electricians, T.....	167	152	140-162	-	-	-
Machinists, T.....	174	151	142-160	-	-	-
Maintenance men, general utility, T.....	82	133	121-147	-	-	-
Mechanics, T.....	162	142	133-149	-	-	-
<u>Supervision</u>						
Second hands, T.....	225	159	142-172	-	-	-
<u>Yarn preparation</u>						
Card tenders, T.....	254	109	105-112	22	106	102-111
Doffers, spinning frame, T.....	127	113	105-120	34	107	103-111
Doffers, spinning frame, Inc.....	158	128	122-135	46	121	114-128
Slasher tenders, T.....	183	131	123-143	-	-	-
Slubber tenders, T.....	64	114	106-128	(4/)	(4/)	(4/)
Slubber tenders, Inc.....	187	130	123-138	62	122	115-129
Spinners, ring frame, T.....	(4/)	(4/)	(4/)	92	110	103-115
Spinners, ring frame, Inc.....	55	119	114-128	196	117	111-123
Twister tenders, T.....	92	112	105-120	61	107	102-113
Twister tenders, Inc.....	44	124	115-134	33	122	111-131
Winders, yarn, T.....	42	106	102-111	165	108	102-111
Winders, yarn, Inc.....	30	121	108-134	201	116	110-123
<u>Weaving</u>						
Loom fixers, Jacquard, T.....	36	167	155-185	-	-	-
Loom fixers, other than Jacquard, T.....	182	154	146-166	-	-	-
Weavers, automatic plain loom, T.....	26	127	118-135	19	125	118-131
Weavers, automatic plain loom, Inc.....	150	133	126-139	156	131	125-137
Weavers, box loom, Inc.....	23	145	132-155	(4/)	(4/)	(4/)
Weavers, dobby loom, Inc.....	40	140	130-148	40	137	130-144
Weavers, Jacquard loom, Inc.....	31	143	132-174	22	139	128-149
<u>Inspection</u>						
Inspectors, cloth, hand, T.....	52	112	107-117	108	106	103-109
Inspectors, cloth, machine, T.....	52	110	105-115	91	105	103-108
<u>Dyeing and finishing</u>						
Calender tenders, T.....	19	112	108-117	-	-	-
Color mixers, dye house, T.....	23	120	111-129	-	-	-
Dry-cans operators, T.....	30	112	105-115	-	-	-
Dyeing-machine tenders, raw stock, T.....	23	107	103-112	-	-	-
Dyeing-machine tenders, yarn, T.....	21	115	108-123	-	-	-
Tenter-frame tenders, T.....	23	111	106-120	-	-	-
<u>Material handling</u>						
Battery hands, T.....	64	105	100-105	152	103	100-106
Battery hands, Inc.....	(4/)	(4/)	(4/)	39	106	103-109
Filling hands, T.....	168	102	100-105	-	-	-
Roving men, T.....	253	103	100-105	34	102	100-105
Truckers, hand, T.....	213	102	100-105	(4/)	(4/)	(4/)
<u>Other</u>						
Janitors, T.....	307	100	100-100	117	100	100-100
Stock clerks, T.....	145	118	110-129	33	112	105-120
Watchmen, T.....	273	104	100-109	-	-	-

^{1/} Straight-time average hourly earnings (excluding premium pay for overtime and night work).

^{2/} T-Time; Inc.= Incentive.

^{3/} Total mills covered - 307.

^{4/} Number of mills too small to justify comparisons.

CHANGES IN WAGE RELATIONSHIPS, 1937-1946

During the past few years wage adjustments have centered about the minimum rate. The Fair Labor Standards Act, which went into effect in October 1938, provided initially for a minimum rate of 25 cents an hour and for a 40-cent minimum not later than October 1945. However, successive increases, established through the industry committee procedure provided for in the Act, raised the minimum rate to 32.5 cents an hour in October 1939, to 37.5 cents in June 1941, and to the 40-cent level by April 1942. During the period in which the National War Labor Board was in operation, additional increases in the effective rate occurred through Board orders in dispute cases and through the approval of voluntary application for wage adjustments. The decisions of the National War Labor Board in dispute cases affecting the cotton textile industry took the form of general increases raising the minimum rate to a specified level with equal or graduated increases in cents to all workers above the minimum. These decisions usually applied directly to only small segments of the industry, but many of the other plants soon adjusted wages in accordance with the rulings. This Board and its successor, the National Wage Stabilization Board, either directed or approved increases in the minimum rate to 47.5 cents an hour in August 1942, to 50 cents in February 1944, to 55 cents in February 1945, and to 65 cents in January 1946. It is not to be implied, of course, that all mills uniformly adjusted their rates to the minimum described above. For example, less than one-half of the Southeastern mills studied reported a 65-cent minimum rate in April-May 1946, although this rate had been in effect in a number of mills since January of that year.

The effects of increasing minimum rates and the rise in the industry's wage level upon occupational wage relationships can be roughly measured by comparing the average hourly earnings data obtained by the Bureau of Labor Statistics in surveys in April 1937, September 1940, and April-May 1946.^{4/} These data, consisting of regional averages by occupation, differentiated by sex but not by method of wage payment, do not permit as precise a comparison of wage relationships as would be desired, but they do reveal the broad direction of the changes that occurred.

A noteworthy feature of Southern wage scales in 1937 was the wide spread among various low-skilled jobs. For example, women filling and battery hands averaged 48 percent more than women sweepers and scrubbers (included among janitors in the present study). The differential between men in the same jobs was about half as great, but it was still considerable when compared to the small differential prevailing in the North at that time and in the South in later years. As a consequence of these low job rates, the percentage spread between the lowest-paid occupation and the skilled groups was greater in the South than in the North, a situation which was reversed by 1940. However, it is important to note that insofar as the basic processing and maintenance jobs were concerned, that is, with

^{4/} For 1937 data, see Bulletin No. 663 "Wages in Cotton-Goods Manufacturing"; for 1940 data, Monthly Labor Review, December 1941; for 1946 data, "Wage Structure: Cotton Textiles, 1946".

the exclusion of cleaners, sweepers, and the like, wage relationships in the South as compared with the North showed essentially the same features in 1937 as this study shows for 1946. The over-all spread, percentage-wise, narrowed in both regions over this period.

The 25 and 32.5-cent minima, put into effect between 1937 and 1940, brought no perceptible change in wage relationships in the North as a whole, although changes might have taken place in individual mills. By and large, Northern mills were not affected by these minima, and since wage levels had not moved upward during this period there was no problem in maintaining job differentials. In the South, however, the legal minima raised the levels of the extremely low-wage jobs mentioned above up to the status of filling and battery hands, roving men, and other unskilled groups, leaving unchanged the relationships among the bulk of the occupations, except for a slight loss in position for the highest-skilled. The clustering of low-skilled jobs within a narrow wage range reduced considerably the 1937 spread between the lowest-paid job and the unskilled, semi-skilled and skilled groups. To this extent, therefore, differentials were not maintained in the South following the introduction of minimum wage legislation. In 1940 as in 1946 unskilled jobs were grouped within a narrower range in the South than in the North, skilled occupations were somewhat better placed in Northern wage scales, and the spread between the unskilled and the skilled was narrower in the South than in the North. On the other hand, the percentage differentials maintained among a large group of occupations were similar in the two regions.

Between the Fall of 1940 and the Spring of 1946 straight-time average earnings of cotton textile workers rose from 40 to 75 cents an hour, and almost half of the mills in the industry brought minimum entrance rates up to 65 cents or better. In the North, the increase in earnings was accompanied by a widening of cents-per-hour differentials among occupations, but a narrowing of percentage differentials. A similar change took place in Southern wage scales, although it appears that the narrowing of percentage differentials in the South was somewhat less than in the North. In both regions, the across-the-board increases granted during this period contributed toward the reduction of percentage differentials. It is significant to note, however, that these regional data offer no evidence that the emphasis on higher minimum rates compressed the low-skilled occupations into narrower brackets, nor did it result in an appreciable reduction in the spread between the low-skilled and the semi-skilled jobs.

VARIATION IN WAGE RELATIONSHIPS WITH UNIONIZATION AND TYPE OF MILL.

In some measure differences in wage relationships as between union and nonunion mills and integrated and yarn mills contribute to or are derived from the differences noted above between North and South. The Bureau's survey in April-May 1946 covered more union mills in the New England and Middle Atlantic States than in the South, while almost all yarn mills studied were in the South.

Second hands, loom fixers, machinists, carpenters, and slasher tenders occupied considerably higher positions in union than in nonunion wage scales (table 3). There was also a slightly greater wage spread among the low-skilled jobs in union than in nonunion mills. With these exceptions and with other minor variations, there was a high degree of similarity in the two wage patterns.

Among the occupations common to both yarn and integrated mills, men doffers, twister tenders, slubber tenders, watchmen, and women spinners, all on a time basis, and women spinners and winders on incentive, were rated higher in the integrated than in yarn mills (table 4). Machinists, carpenters, card grinders, and second hands also occupied higher position in the wage scale for integrated mills. Among the other occupations the differences were negligible.

Differences between union and nonunion mills and yarn and integrated mills may also account for part of the variation in wage relationships among the four Southeastern States considered individually (table 5). Despite the differences among individual jobs that can be observed in these data, there was a high degree of uniformity in the occupational patterns of these four States.

Table 2.--OCCUPATIONAL WAGE RATES 1/AS PERCENTAGES OF RATES FOR MEN JANITORS, COTTON MILLS IN
SELECTED REGIONS, APRIL-MAY 1946

Occupation, sex, and method of wage payment 2/	Southeast 3/			New England 3/		
	Percent of rates for			Percent of rates for		
	men janitors			men janitors		
	Number: of mills	Average:	Middle range within which half of the mills fell	Number: of mills	Average:	Middle range within which half of the mills fell
<u>Men</u>						
<u>Maintenance</u>						
Card grinders, T.....	183	137	126-141	43	143	136-143
Carpenters, T.....	148	128	117-145	40	157	145-162
Electricians, T.....	106	147	137-159	39	155	143-162
Machinists, T.....	114	147	138-157	41	157	148-162
Maintenance men, general utility, T...	54	131	115-143	(4/)	(4/)	(4/)
Mechanics, T.....	130	140	132-148	(4/)	(4/)	(4/)
<u>Supervision</u>						
Second hands, T.....	145	159	142-171	45	166	154-176
<u>Yarn preparation</u>						
Card tenders, T.....	180	108	104-111	42	111	109-118
Doffers, spinning frame, T.....	94	112	105-119	20	121	116-125
Doffers, spinning frame, Inc.....	113	128	122-135	25	128	124-134
Slasher tenders, T.....	120	129	120-137	37	148	143-149
Slubber tenders, T.....	47	111	105-120	(4/)	(4/)	(4/)
Slubber tenders, Inc.....	140	129	123-135	24	141	134-149
Spinners, ring frame, Inc.....	27	117	113-123	(4/)	(4/)	(4/)
Twister tenders, T.....	70	111	105-116	(4/)	(4/)	(4/)
Twister tenders, Inc.....	32	126	120-134	(4/)	(4/)	(4/)
Winders, yarn, T.....	28	106	102-109	(4/)	(4/)	(4/)
Winders, yarn, Inc.....	19	110	105-120	(4/)	(4/)	(4/)
<u>Weaving</u>						
Loom fixers, other than Jacquard, T...	107	153	146-157	37	169	163-171
Weavers, automatic plain loom, T.....	20	126	118-131	(4/)	(4/)	(4/)
Weavers, automatic plain loom, Inc....	103	133	126-138	31	135	130-142
Weavers, dobby loom, Inc.....	25	140	129-148	(4/)	(4/)	(4/)
<u>Inspection</u>						
Inspectors, cloth, hand, T.....	33	112	106-116	(4/)	(4/)	(4/)
Inspectors, cloth, machine, T.....	37	110	105-114	(4/)	(4/)	(4/)
<u>Material handling</u>						
Battery hands, T.....	34	105	102-106	20	105	102-105
Filling hands, T.....	109	103	100-107	32	100	98-100
Roving men, T.....	179	103	100-105	41	103	100-104
Truckers, hand, T.....	151	102	100-105	35	100	100-108
<u>Other</u>						
Stock clerks, T.....	97	123	110-134	24	115	107-128
Watchmen, T.....	187	103	100-108	43	112	106-118
<u>Women</u>						
<u>Yarn preparation</u>						
Doffers, spinning frame, T.....	19	107	104-114	(4/)	(4/)	(4/)
Doffers, spinning frame, Inc.....	21	121	114-126	(4/)	(4/)	(4/)
Slubber tenders, Inc.....	36	125	115-132	(4/)	(4/)	(4/)
Spinners, ring frame, T.....	68	108	103-115	(4/)	(4/)	(4/)
Spinners, ring frame, Inc.....	137	115	109-121	33	120	114-125
Twister tenders, T.....	37	107	105-113	(4/)	(4/)	(4/)
Winders, yarn, T.....	109	106	101-108	28	111	107-117
Winders, yarn, Inc.....	137	115	109-121	33	122	116-129
<u>Weaving</u>						
Weavers, automatic plain loom, Inc....	105	129	123-136	31	135	130-140
Weavers, dobby loom, Inc.....	25	134	126-142	(4/)	(4/)	(4/)
<u>Inspection</u>						
Inspectors, cloth, hand, T.....	64	106	105-109	26	108	105-112
Inspectors, cloth, machine, T.....	62	105	103-111	(4/)	(4/)	(4/)
<u>Material handling</u>						
Battery hands, T.....	96	105	102-107	30	105	101-105
Battery hands, Inc.....	27	108	106-110	(4/)	(4/)	(4/)
Roving men, T.....	20	103	102-105	(4/)	(4/)	(4/)
<u>Other</u>						
Janitors, T.....	87	100	98-100	(4/)	(4/)	(4/)
Stock clerks, T.....	19	112	108-117	(4/)	(4/)	(4/)

1/ Straight-time average hourly earnings (excluding premium pay for overtime and night work).

2/ T=Time; Inc.= Incentive.

3/ Number of mills covered: Southeast, 200; New England, 49.

4/ Number of mills too small to justify comparisons.

Table 3.-- OCCUPATIONAL WAGE RATES ^{1/} IN UNION AND NONUNION MILLS AS PERCENTAGES OF RATES FOR MEN JANITORS, COTTON TEXTILE INDUSTRY, APRIL-MAY 1946

Occupation, sex, and method of wage payment ^{2/}	Union mills ^{3/}			Nonunion mills ^{3/}		
	Percent of rates for men janitors			Percent of rates for men janitors		
	Number of mills	Average	Middle range within which half of the mills fell	Number of mills	Average	Middle range within which half of the mills fell
<u>Men</u>						
<u>Maintenance</u>						
Card grinders, T	77	141	137-143	181	138	127-144
Carpenters, T	71	149	135-161	140	129	116-146
Electricians, T	67	153	143-162	99	151	137-161
Machinists, T	60	157	147-162	113	146	137-157
Maintenance men, general utility, T ..	26	132	125-151	56	133	121-147
Mechanics, T	37	142	137-152	124	142	132-149
<u>Supervision</u>						
Second hands, T	76	166	148-176	148	156	138-169
<u>Yarn preparation</u>						
Card tenders, T	74	111	108-112	179	108	103-112
Doffers, spinning frame, T	31	119	111-123	96	110	105-119
Doffers, spinning frame, Inc.	47	127	122-134	110	129	122-138
Slasher tenders, T	63	140	131-148	119	129	120-138
Slubber tenders, T	(4/)	(4/)	(4/)	46	113	105-125
Slubber tenders, Inc.	52	133	125-142	134	129	122-136
Spinners, ring frame, Inc.	26	122	117-130	28	117	113-139
Twister tenders, T	27	117	108-140	65	111	105-118
Twister tenders, Inc.	(4/)	(4/)	(4/)	34	126	116-136
Winders, yarn, T	(4/)	(4/)	(4/)	33	106	102-111
<u>Weaving</u>						
Loom fixers, Jacquard, T	(4/)	(4/)	(4/)	23	165	146-189
Loom fixers, other than Jacquard, T ..	73	164	151-171	108	154	143-160
Weavers, automatic plain loom, Inc. ...	51	134	129-138	98	132	125-139
Weavers, dobby loom, Inc.	(4/)	(4/)	(4/)	23	140	126-148
Weavers, Jacquard loom, Inc.	(4/)	(4/)	(4/)	22	136	126-174
<u>Inspection</u>						
Inspectors, cloth, hand, T	20	111	108-115	32	112	105-118
Inspectors, cloth, machine, T	19	111	106-115	32	109	103-116
<u>Material handling</u>						
Battery hands, T	31	105	102-105	33	103	100-106
Filling hands, T	58	102	100-105	110	103	100-107
Roving men, T	76	103	100-105	176	102	100-106
Truckers, hand, T	69	102	100-105	143	100	100-105
<u>Other</u>						
Stock clerks, T	52	116	108-129	93	122	111-130
Watchmen, T	81	108	104-114	193	102	100-108
<u>Women</u>						
<u>Yarn preparation</u>						
Doffers, spinning frame, T	(4/)	(4/)	(4/)	19	107	104-111
Doffers, spinning frame, Inc.	23	120	115-128	23	120	114-126
Slubber tenders, Inc.	22	122	115-128	40	120	113-132
Spinners, ring frame, T	21	114	106-115	71	108	103-115
Spinners, ring frame, Inc.	63	117	112-122	133	115	109-122
Twister tenders, T	22	110	103-114	40	106	100-111
Twister tenders, Inc.	(4/)	(4/)	(4/)	21	122	111-132
Winders, yarn, T	48	110	105-115	118	106	101-111
Winders, yarn, Inc.	63	120	112-126	140	115	109-122
<u>Weaving</u>						
Weavers, automatic plain loom, Inc.	53	131	129-135	102	129	123-137
Weavers, dobby loom, Inc.	(4/)	(4/)	(4/)	23	135	128-142
<u>Inspection</u>						
Inspectors, cloth, hand, T	37	108	105-109	72	106	102-110
Inspectors, cloth, machine, T	36	106	104-109	56	104	102-108
<u>Material handling</u>						
Battery hands, T	52	105	101-105	102	103	100-106
Battery hands, Inc.	(4/)	(4/)	(4/)	21	106	103-109
Roving men, T	(4/)	(4/)	(4/)	24	102	100-106
<u>Other</u>						
Janitors, T	38	100	100-100	79	100	100-100
Stock clerks, T	(4/)	(4/)	(4/)	24	112	105-122

^{1/} Straight-time average hourly earnings (excluding premium pay for overtime and night work).

^{2/} T=Time; Inc.= Incentive.

^{3/} Number of mills covered: union, 93; nonunion, 213. Information on unionization was not available for 1 establishment.

^{4/} Number of mills too small to justify comparisons.

Table 4.-- OCCUPATIONAL WAGE RATES ^{1/} IN INTEGRATED AND YARN MILLS AS PERCENTAGES OF RATES FOR MEN JANITORS, COTTON TEXTILE INDUSTRY, APRIL-MAY 1946

Occupation, sex, and method of wage payment 2/	Integrated mills 3/			Yarn Mills 3/		
	Number of mills	Percent of rates for men janitors		Number of mills	Percent of rates for men janitors	
		Average	Middle range within which half of the mills fell		Average	Middle range within which half of the mills fell
<u>Men</u>						
<u>Maintenance</u>						
Card grinders, T.....	194	141	134-144	55	129	121-139
Carpenters, T.....	163	136	122-152	42	125	115-148
Electricians, T.....	139	152	142-162	21	153	131-179
Machinists, T.....	138	152	142-160	32	146	129-162
Maintenance men, general utility, T...	57	132	123-146	19	131	118-147
Mechanics, T.....	116	142	136-149	38	142	127-151
<u>Supervision</u>						
Second hands, T.....	170	163	149-175	46	133	124-151
<u>Yarn preparation</u>						
Card tenders, T.....	186	109	105-112	68	108	103-112
Doffers, spinning frame, T.....	73	116	110-122	49	108	103-115
Doffers, spinning frame, Inc.....	129	128	122-137	27	128	122-134
Slubber tenders, T.....	43	117	106-128	18	111	103-120
Slubber tenders, Inc.....	144	131	122-139	43	129	123-135
Twister tenders, T.....	46	114	105-120	41	110	105-118
<u>Material handling</u>						
Roving men, T.....	192	103	100-105	61	102	100-105
Truckers, hand, T.....	159	102	100-105	47	101	100-104
<u>Other</u>						
Watchmen, T.....	191	105	100-111	66	100	100-105
<u>Women</u>						
<u>Yarn preparation</u>						
Spinners, ring frame, T.....	58	112	105-115	34	108	102-114
Spinners, ring frame, Inc.....	151	116	111-123	46	111	109-120
Twister tenders, T.....	38	107	103-114	19	108	102-113
Winders, yarn, T.....	111	103	103-111	33	107	102-111
Winders, yarn, Inc.....	135	117	112-123	58	113	108-120
<u>Other</u>						
Janitors, T.....	69	100	98-100	25	100	98-100

^{1/} Straight-time average hourly earnings (excluding premium pay for overtime and night work).

^{2/} T-Time; Inc.= Incentive.

^{3/} Number of mills covered: integrated, 202; yarn, 74. Independent weaving mills are not shown separately.

Table 5.--OCCUPATIONAL WAGE RATES 1/ AS PERCENTAGES OF RATES FOR MEN JANITORS, COTTON TEXTILE MILLS IN 4 SOUTHEASTERN STATES, APRIL-MAY 1946

Occupation, sex, and method of wage payment 2/	Alabama 3/				Georgia 3/				South Carolina 3/				North Carolina 3/			
	Percent of rates for men janitors		Number of mills		Percent of rates for men janitors		Number of mills		Percent of rates for men janitors		Number of mills		Percent of rates for men janitors		Number of mills	
	Average	Middle range within which half of the mills fell	Average	Middle range within which half of the mills fell	Average	Middle range within which half of the mills fell	Average	Middle range within which half of the mills fell	Average	Middle range within which half of the mills fell	Average	Middle range within which half of the mills fell	Average	Middle range within which half of the mills fell	Average	Middle range within which half of the mills fell
Men																
Maintenance																
Card grinders, T.....	145	141 - 151	45	132 - 144	139	132 - 144	42	132 - 144	142	138 - 151	69	138 - 151	131	123 - 140		
Carpenters, T.....	130	121 - 150	40	116 - 146	135	116 - 146	36	116 - 146	124	113 - 135	50	113 - 135	130	117 - 143		
Electricians, T.....	154	145 - 162	28	135 - 155	144	135 - 155	33	135 - 155	148	142 - 159	26	142 - 159	145	133 - 154		
Mechanists, T.....	162	147 - 165	37	134 - 158	148	134 - 158	27	134 - 158	142	137 - 158	34	137 - 158	146	142 - 153		
Mechanics, T.....	143	134 - 155	30	132 - 149	142	132 - 149	25	132 - 149	140	138 - 147	52	138 - 147	137	129 - 146		
Supervision	159	146 - 175	35	148 - 177	164	148 - 177	42	148 - 177	163	148 - 174	49	148 - 174	146	126 - 163		
Yarn preparation																
Card tenders, T.....	109	107 - 112	43	105 - 114	109	105 - 114	42	105 - 114	108	105 - 111	70	105 - 111	107	103 - 110		
Doffers, spinning frame, T.....	(4/)	(4/)	15	108 - 118	110	108 - 118	18	108 - 118	115	103 - 122	48	103 - 122	109	103 - 115		
Doffers, spinning frame, Inc.....	128	120 - 138	37	122 - 135	128	122 - 135	25	122 - 135	129	118 - 138	32	118 - 138	128	123 - 137		
Slasher tenders, T.....	138	132 - 144	32	118 - 134	128	118 - 134	33	118 - 134	124	117 - 130	34	117 - 130	130	123 - 138		
Slubber tenders, Inc.....	130	125 - 137	40	122 - 132	127	122 - 132	30	122 - 132	132	125 - 137	46	125 - 137	128	122 - 135		
Weaving																
Loom fixers, other than Jacquard, T.....	154	146 - 164	27	149 - 158	154	149 - 158	31	149 - 158	151	145 - 160	30	145 - 160	154	143 - 155		
Weavers, automatic plain loom, Inc.....	132	127 - 140	32	125 - 136	129	125 - 136	31	125 - 136	134	126 - 140	21	126 - 140	134	126 - 142		
Material handling																
Filling hands, T.....	103	100 - 105	31	102 - 108	105	102 - 108	32	102 - 108	103	102 - 107	27	102 - 107	102	100 - 104		
Roving men, T.....	105	102 - 108	42	102 - 107	104	102 - 107	41	102 - 107	103	100 - 105	68	100 - 105	102	100 - 105		
Truckers, hand, T.....	103	100 - 105	36	100 - 105	103	100 - 105	41	100 - 105	102	100 - 105	49	100 - 105	101	100 - 105		
Other																
Stock clerks, T.....	124	112 - 129	26	108 - 134	117	108 - 134	28	108 - 134	137	122 - 155	24	122 - 155	114	105 - 123		
Watchmen, T.....	106	102 - 109	42	100 - 108	103	100 - 108	43	100 - 108	103	100 - 106	73	100 - 106	100	100 - 103		
Women																
Yarn preparation																
Spinners, ring frame, T.....	(4/)	(4/)	15	106 - 115	111	106 - 115	(4/)	106 - 115	(4/)	(4/)	30	(4/)	106	100 - 113		
Spinners, ring frame, Inc.....	116	113 - 126	34	111 - 122	117	111 - 122	34	111 - 122	115	109 - 123	52	109 - 123	112	109 - 120		
Winders, yarn, T.....	(4/)	(4/)	26	103 - 111	107	103 - 111	23	103 - 111	103	102 - 108	46	102 - 108	107	102 - 111		
Winders, yarn, Inc.....	118	109 - 128	34	110 - 120	115	110 - 120	28	110 - 120	118	110 - 123	55	110 - 123	112	107 - 118		
Weaving																
Weavers, automatic plain loom, Inc.....	131	123 - 137	33	123 - 137	129	123 - 137	32	123 - 137	134	124 - 137	22	124 - 137	132	126 - 137		
Inspection																
Inspectors, cloth, hand, T.....	(4/)	(4/)	15	105 - 115	109	105 - 115	27	105 - 115	106	105 - 109	16	105 - 109	103	100 - 106		
Inspectors, cloth, machine, T.....	(4/)	(4/)	15	102 - 109	103	102 - 109	16	102 - 109	105	103 - 109	20	103 - 109	105	100 - 110		
Other																
Battery hands, T.....	105	100 - 109	30	103 - 107	105	103 - 107	28	103 - 107	105	103 - 107	21	103 - 107	103	100 - 105		
Janitors, T.....	100	97 - 100	28	97 - 100	100	97 - 100	20	97 - 100	100	98 - 102	21	98 - 102	100	98 - 100		

1/ Straight-time average hourly earnings (excluding premium pay for overtime and night work).

2/ T-time; Inc.: Incentive.

3/ Number of mills covered; Alabama, 26; Georgia, 48; South Carolina, 45; North Carolina, 78.

4/ Number of mills too small to justify comparisons.

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OCCUPATIONAL WAGE RELATIONSHIPS

TEXTILE DYEING AND FINISHING

1946

SERIES I
NO. 10



FEB 16 1948

UNIVERSITY OF MICHIGAN

UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

WAGE ANALYSIS BRANCH
INDUSTRY WAGE STUDIES DIVISION
HARRY OBER, CHIEF

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PREFACE

The Industry Wage Study program of the Bureau of Labor Statistics is designed to yield a variety of wage data for use in collective bargaining, wage determination, placement, and minimum wage administration.

The results of the Industry Wage Studies are made available in two series of bulletins. Series 1, entitled "Occupational Wage Relationships", provides measures of prevailing wage relationships among key occupations in each industry. Series 2 on "Wage Structure" is devoted to an analysis of actual hourly earnings (straight-time) and the elements that influence variations in wages, such as location, size of establishment, and method of wage payment. This series also presents information relating to the occupational composition of the industry's labor force and such practices as shift differential payments, paid vacations, paid lunch periods, nonproduction bonuses, insurance, sick leave, and incentive wage systems. Locality tabulations (forms OWR-17 and 18) are available in the regional offices of the Bureau.

This bulletin is the eleventh in the Occupational Wage Relationship series. Similar studies for cotton, woolens and worsteds, and silk and rayon manufacturing establishments are available or in preparation.

July 1947

OCCUPATIONAL WAGE RELATIONSHIPS IN THE TEXTILE DYEING AND FINISHING INDUSTRY, JULY 1946 1/

INTRODUCTION

The purpose of this study is to measure central tendencies in wage differentials among key occupations in textile dyeing and finishing plants. The textile dyeing and finishing industry, as defined for purpose of this study, embraces establishments primarily engaged in bleaching, dyeing, printing, finishing, or otherwise converting cotton, linen, silk, and rayon fabrics, yarn, and raw stock. 2/ The present analysis of occupational wage relationships is based on the wage practices of 87 establishments, each employing 50 or more workers. In July 1946, these plants employed approximately 30,000 workers, or slightly more than half of the industry's plant labor force. Of the 87 establishments, 60 were primarily engaged in the dyeing and finishing of cotton and linen textile products, and 27 processed silk and rayon fabrics and yarn.

In order to measure occupational wage differentials within each plant and to arrive at a single figure which would express the average standing of each occupation among the plants studied, the following method was used: In each of the 87 plants covered, the average hourly rates 3/ for selected occupations were converted to percentages of the combined rates for men janitors and hand truckers - two unskilled occupational groups. In this manner a ladder-like arrangement of occupational wage levels was developed for each plant. To obtain a representative scale for the industry as a whole and for the major subdivisions, the plant percentages computed for each occupation were arrayed and the medians or average percentages were selected. The resulting scales indicate the average relationships which occupational wage rates bear to the combined earnings of janitors and hand truckers and to each other. By this method, differences

1/ Prepared by Willis C. Quant. This report utilizes extensive wage data obtained through an industry wage survey conducted under the direction of the Bureau's regional wage analysts. Another bulletin, "Wage Structure: Textile Dyeing and Finishing, 1946" describes the wage structure of the industry in terms of actual hourly earnings. Job descriptions for the textile dyeing and finishing industry are available upon request.

2/ Excludes woolen and worsted textile dyeing and finishing plants because of the relatively small number of plants and workers engaged in that work.

3/ Or average hourly earnings in the case of incentive workers. Premium pay for overtime and night work were excluded from these data.

among plants in actual wage levels and in employment were eliminated. ^{4/} To indicate, at least in part, the variation in wage practices found in the industry, the middle range within which half of the plant percentages fell is shown for each occupation in the accompanying tables.

OCCUPATIONAL WAGE RELATIONSHIPS

The Industry as a Whole

The rates for men time workers in the selected occupations tended to fall within a relatively narrow range in the industry as a whole (table 1). Skilled maintenance electricians, while commanding the highest rates, were paid only 40 percent more than unskilled janitors and hand truckers, who were at the bottom of the wage ladder. This range can be transposed into money terms: for example, assuming that unskilled workers were paid 75 cents an hour, the rate for skilled electricians in the average situation would be 30 cents an hour higher. Within these limits, workers on a time basis tended to be grouped roughly according to skill levels. Thus, skilled maintenance and supervisory workers, excepting general utility maintenance men, were paid rates averaging from 30 to 40 percent above the combined rates for janitors and hand truckers. Among processing occupations, which are generally considered as semi-skilled, the averages fell in an array ranging from 3 to 19 percent above the base. However, in each occupation for which comparison is possible, incentive workers earned more than time workers, the differences ranging from 8 percent for mangle tenders to 19 percent for tenter-frame tenders. ^{5/}

Among women workers, who comprised only a small part of the industry's plant labor force, only cloth inspectors and cloth winders were found in a sufficient number of plants to justify the presentation of data. For both of these occupations men were paid more than women.

Variations in Wage Relationships by Product

The comparison between plants processing cotton and linen and those processing silk and rayon, as presented in table 1, shows on the whole a close similarity in the ranking of occupations common to both types of plants. Noteworthy exceptions were dyeing-machine tenders (jigger) and mangle tenders, who were rated higher in cotton and linen plants than in silk and rayon plants.

^{4/} Thus, the wage relationships indicated in this report will not necessarily coincide with those reflected by actual average earnings data presented in the report "Wage Structure: Textile Dyeing and Finishing, 1946". Moreover, coverage was not the same for both reports.

^{5/} In addition to indicating relationships to the base, the average percentages can also be used to measure the percentage differential between other occupations in the job structure. For example, the figures for maintenance electricians and maintenance carpenters are 140 and 131, respectively. Hence, the former were paid about 7 percent more than the latter in the average plant scale (140/131).

In relation to other occupations, maintenance jobs occupied higher positions in the wage scale for cotton and linen plants than for silk and rayon plants. Hence, the spread between the unskilled and the skilled, percentagewise, was greater for the former type of establishment. 6/ It is interesting to note, however, that the maintenance occupations were concentrated within a relatively narrower wage bracket in cotton and linen plants than in silk and rayon plants.

Regional Differences in Wage Relationships

The silk and rayon plants studied were concentrated largely in the North, hence a regional comparison for this branch of the industry is not possible. Of the 60 cotton and linen plants covered, 42 were in the North and 18 were in the South. 7/ Despite the relatively small number of Southern plants, the pattern of differences between North and South appears to be sufficiently consistent to warrant study (table 2). 8/

The spread between janitors and hand truckers, at the low end of the wage scale, and maintenance occupations, at the upper end, was considerably wider in Southern than in Northern wage scales. As the values shown in table 2 indicate, almost all occupations held a greater spread above the base in Southern than in Northern plants. There was, however, a greater degree of similarity in wage relationships between the two regions than these figures reveal at first glance. In the first place, the primary difference between Northern and Southern wage scales lay in the position of the two unskilled base jobs relative to other occupations. In the North, hand truckers and janitors were rated at a level equivalent to that of watchmen and slightly below dry-can operators and mangle tenders, whereas in the South there was a substantial gap between janitors and hand truckers and the other occupations at the lower end of the wage scale. 9/ From watchmen upward, however, the only important differences between Northern and Southern wage scales lay in the positions of second hands and machinists, the former appearing relatively low and the latter relatively high in the Southern wage pattern.

6/ Actual hourly earnings were generally higher in silk and rayon plants than in cotton and linen plants. The higher percentages shown in table 1 for the latter type of plants are reflections of the low level of earnings of janitors and hand truckers rather than a high wage level for the maintenance jobs.

7/ Connecticut, Delaware, Massachusetts, New Jersey, New York, Pennsylvania, and Rhode Island comprised the North, and Georgia, Kentucky, North Carolina, South Carolina, and Tennessee made up the South.

8/ This comparison is limited to men time workers only.

9/ A hypothetical illustration might clarify this difference between North and South: If janitors and hand truckers were raised to a position in Southern wage scales corresponding to their position in Northern wage scales, that is, on a par with watchmen and slightly below dry-can operators, the wage relationships in the two regions would be brought closely into line.

Wage Relationships in Union and Nonunion Establishments 10/

Union plants predominated among the 60 cotton and linen textile dyeing and finishing mills covered by this study, the ratio being 3 union to 2 nonunion establishments. 11/ A comparison between union and nonunion wage relationships among time workers shows but few marked differences in the ranking of occupations in the respective groups (table 3). Moreover, the spread between high-wage skilled occupations and the low-wage unskilled jobs was quite similar in the two wage scales. However, there was a somewhat wider spread among semi-skilled occupations in nonunion than in union plants. For example, in union plants dyehouse color mixers, the highest-paid among the processing jobs studied, earned about 12 percent more than dry-can operators, the lowest-paid, whereas in nonunion plants the advantage of color mixers over dry-can operators amounted to 18 percent.

10/ Establishments were classified as unionized if more than half of the plant workers were covered by terms of union agreements.

11/ The nonunion establishments covered in the silk and rayon branch of the industry were too few to permit comparisons.

Table 1.--OCCUPATIONAL WAGE RATES AS PERCENTAGES OF RATES FOR MEN IN 2 UNSKILLED JOBS, 1/
TEXTILE DYING AND FINISHING INDUSTRY, BY TYPE OF PRODUCT, JULY 1946

Occupation, sex, and method of wage payment	Cotton and linen and silk and rayon combined			Cotton and linen			Silk and rayon		
	Percent of rates for:			Percent of rates for:			Percent of rates for:		
	unskilled men			unskilled men			unskilled men		
	Number of plants	Average	Middle range: within which half of the plants fell	Number of plants	Average	Middle range: within which half of the plants fell	Number of plants	Average	Middle range: within which half of the plants fell
TIME WORKERS									
Men									
Maintenance									
Carpenters	55	131	125-140	43	134	126-140	12	126	122-129
Electricians	53	140	129-150	40	140	130-148	13	137	125-159
Machinists	44	138	130-154	36	136	130-146	(2/)	(2/)	(2/)
Maintenance men, general									
utility	31	123	119-136	16	132	119-137	15	121	119-123
Mechanics	40	139	122-151	30	139	124-151	10	133	122-162
Supervision									
Second hands	46	137	119-150	37	140	122-154	(2/)	(2/)	(2/)
Processing									
Back tenders, printing	17	118	106-122	14	119	106-123	(2/)	(2/)	(2/)
Boil-off machine operators	27	111	102-119	(2/)	(2/)	(2/)	15	103	100-111
Calender tenders	49	106	103-114	30	106	104-114	19	106	102-108
Color mixers, dye house	61	116	108-123	38	118	107-127	23	115	111-120
Color mixers, print shop ..	19	114	112-121	16	115	113-126	(2/)	(2/)	(2/)
Dry-can operators	51	104	101-111	34	104	101-112	17	102	100-106
Dyeing-machine tenders, cloth, jigger	50	110	105-116	33	111	106-117	17	106	101-113
Dyeing-machine tenders, cloth, other	40	109	105-116	28	108	101-116	12	109	106-113
Dyeing-machine tenders, cloth, spiral dye beck ..	14	112	102-119	(2/)	(2/)	(2/)	10	104	100-115
Kier operators	34	111	103-114	33	111	103-114	(2/)	(2/)	(2/)
Mangle tenders	39	108	101-116	29	109	103-117	10	103	100-115
Tenter-frame tenders	59	105	101-111	37	105	101-113	22	106	100-109
Washer tenders, cloth	47	105	101-112	37	104	101-112	(2/)	(2/)	(2/)
Winders, cloth, bolts or tubes	45	103	100-111	28	104	100-111	17	102	100-106
Other									
Inspectors, cloth, hand	26	119	108-127	20	121	110-127	(2/)	(2/)	(2/)
Janitors	71	100	98-100	50	100	98-100	21	100	98-100
Truckers, hand	69	100	100-102	49	100	100-102	20	100	100-102
Watchmen	67	100	96-107	47	103	98-108	20	100	91-102
Women									
Processing									
Winders, cloth, bolts or tubes	23	92	90-103	17	95	91-103	(2/)	(2/)	(2/)
Other									
Inspectors, cloth, hand	17	103	91-115	12	103	91-116	(2/)	(2/)	(2/)
INCENTIVE WORKERS									
Men									
Processing									
Calender tenders	13	118	111-126	10	119	111-124	(2/)	(2/)	(2/)
Mangle tenders	14	117	109-120	11	115	109-120	(2/)	(2/)	(2/)
Tenter-frame tenders	12	125	119-129	10	121	115-129	(2/)	(2/)	(2/)
Washer tenders, cloth	12	115	114-119	(2/)	(2/)	(2/)	(2/)	(2/)	(2/)
Winders, cloth, bolts or tubes	12	120	115-128	10	120	115-139	(2/)	(2/)	(2/)
Other									
Truckers, hand	12	111	108-112	(2/)	(2/)	(2/)	(2/)	(2/)	(2/)

1/ Wage rates are straight-time hourly earnings (excluding premium pay for overtime and night work). The unskilled jobs include janitors and hand truckers paid on a time-rate basis.

2/ Number of plants or workers too small to justify comparisons.

Table 2.--OCCUPATIONAL WAGE RATES FOR MEN THE WORKERS AS PERCENTAGES OF RATES FOR 2 UNSKILLED JOBS, 1/ COTTON AND LINEN DYEING AND FINISHING PLANTS, BY REGION, JULY 1946

Occupation	North				South			
	Percent of rates for:		Percent of rates for:		Percent of rates for:		Percent of rates for:	
	unskilled men		unskilled men		unskilled men		unskilled men	
	Number of plants	Middle range: Within which half of the plants fell	Number of plants	Middle range: Within which half of the plants fell	Number of plants	Middle range: Within which half of the plants fell	Number of plants	Middle range: Within which half of the plants fell
<u>Maintenance</u>								
Carpenters	29	129	126-137	13	142	133-153		
Electricians	28	135	128-142	12	144	139-155		
Machinists	25	133	128-141	11	158	145-164		
Mechanics	17	135	122-144	13	145	131-152		
<u>Supervision</u>								
Second hands	25	140	119-156	12	140	126-147		
<u>Processing</u>								
Color mixers, dye house	25	115	107-121	13	123	120-136		
Dry-can operators	25	103	100-106	9	112	111-120		
Dyeing-machine tenders, cloth, jigger	25	110	106-114	8	126	118-130		
Mangle tenders	21	105	102-110	8	116	112-118		
<u>Other</u>								
Janitors	35	100	98-100	15	98	98-100		
Truckers, hand	32	100	100-101	17	100	100-102		
Watchmen	33	100	96-106	14	109	103-114		

1/ Wage rates are straight-time hourly earnings (excluding premium pay for overtime and night work). The unskilled jobs include janitors and hand truckers paid on a time-rate basis.

Table 3.--OCCUPATIONAL WAGE RATES FOR TIME WORKERS IN UNION AND NONUNION PLANTS AS PERCENTAGES OF RATES FOR 2 UNSKILLED JOBS, 1/ COTTON AND LINEN DYEING AND FINISHING PLANTS, JULY 1946

Occupation and sex	Union plants			Nonunion plants		
	Percent of rates for:			Percent of rates for:		
	Number of plants	unskilled men	Middle range: within which half of the plants fell	Number of plants	unskilled men	Middle range: within which half of the plants fell
	Average			Average		
<u>Men</u>						
<u>Maintenance</u>						
Carpenters	27	134	126-138	16	134	128-145
Electricians	27	137	129-148	13	141	134-144
Machinists	23	135	129-143	13	140	133-164
Maintenance men, general utility	9	137	126-144	(2/)	(2/)	(2/)
Mechanics	16	138	122-148	14	139	125-151
<u>Supervision</u>						
Second hands	22	142	123-150	15	136	122-154
<u>Processing</u>						
Back tenders, printing	12	117	106-121	(2/)	(2/)	(2/)
Calender tenders	20	106	105-112	10	107	100-115
Color mixers, dye house	24	116	107-121	14	122	115-136
Color mixers, print shop	12	115	111-121	(2/)	(2/)	(2/)
Dry-can operators	24	104	101-111	10	103	100-120
Dyeing-machine tenders, cloth, jigger	23	110	105-116	10	115	110-130
Dyeing-machine tenders, cloth, other 2/	21	106	101-110	(2/)	(2/)	(2/)
Kier operators	21	109	103-114	12	113	111-125
Mangle tenders	20	105	102-110	9	117	112-120
Tenter-frame tenders	29	105	103-113	8	103	100-105
Washer tenders, cloth	27	104	101-106	10	108	100-115
Winders, cloth, bolts or tubes	19	104	101-108	9	109	100-115
<u>Other</u>						
Inspectors, cloth, hand	15	120	110-124	(2/)	(2/)	(2/)
Janitors	30	100	98-100	20	100	98-100
Truckers, hand	31	100	100-101	18	100	100-103
Watchmen	31	103	98-107	16	103	98-109
<u>Women</u>						
<u>Processing</u>						
Winders, cloth, bolts or tubes	11	97	94-103	(2/)	(2/)	(2/)

1/ Wage rates are straight-time hourly earnings (excluding premium pay for overtime and night work).
The unskilled jobs include janitors and hand truckers paid on a time-rate basis.

2/ Number of plants or workers too small to justify comparisons.

3/ Does not include dyeing-machine tenders, spiral dye beck.

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OCCUPATIONAL WAGE RELATIONSHIPS

WOOLEN AND WORSTED TEXTILES

1946

SERIES I
NO. II



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BUREAU OF LABOR STATISTICS

**WAGE ANALYSIS BRANCH
INDUSTRY WAGE STUDIES DIVISION
HARRY OBER, CHIEF**

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PREFACE

The Industry Wage Study program of the Bureau of Labor Statistics is designed to yield a variety of wage data for use in collective bargaining, wage determination, placement, and minimum wage administration.

The results of the Industry Wage Studies are made available in two series of bulletins. Series 1, entitled "Occupational Wage Relationships", provides measures of prevailing wage relationships among key occupations in each industry. Series 2 on "Wage Structure" is devoted to an analysis of actual hourly earnings (straight-time) and the various elements that influence variations in wages, such as location, size of establishment, and method of wage payment. This series also presents information relating to the occupational composition of the industry's labor force and such practices as shift differential payments, paid vacations, paid lunch periods, nonproduction bonuses, insurance, sick leave, and incentive wage systems. Locality tabulations (forms OWR-17 and 18) are available in the regional offices of the Bureau.

This bulletin is the eleventh in the Occupational Wage Relationship series. Similar studies for the rayon and silk, cotton textile, and dyeing and finishing industries are available.

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INTRODUCTION

In the major textile industries, occupational specialization and the widespread practice of establishing a single mill rate applicable to all workers in the same job category have focused interest on intra-plant pay differentials among occupations. The relative standing or ranking of key occupations in the wage scale of a textile mill usually persists over long periods of time. Although wage differentials among occupations, considered as ratios or percentages rather than in cents-per-hour terms, are subject to change, a substantial modification of such job differentials is generally a comparatively slow development even during times of frequent and extensive changes in actual wage levels. In short, the ranking of occupations and the differentials between occupations constitute the more stable elements in a changing wage scene.

This study examines the central tendencies in occupational wage relationships in the woolen and worsted industry and the variations in wage relationships which might be attributable to the factors that often explain differences among mills in wage rates, such as location, unionization, and size of mill. In order to measure occupational wage differentials within each mill and to arrive at a single figure which would express the average standing of each occupation among the mills studied, it was necessary to eliminate as far as possible the influence of variations among mills in actual wage levels and in employment. For this purpose the following method was used: In each mill studied the hourly rates 2/ paid to selected occupations 3/ in April 1946 were converted to percentages of the rates paid to men loom fixers (other than Jacquard), a highly skilled occupational group. 4/ In this manner, a ladder-like arrangement of occupational wage levels, differentiated by sex of workers and method of wage payment, was developed for each mill. To obtain a representative scale for the industry as a whole and for the major subdivisions, the mill percentages computed for each occupational category were averaged (median). The resulting scales indicate the average wage relationship which key occupations bear to loom fixers and to each other. To indicate, at least in part, the variation in wage practices found in the industry, the middle range within which one-half of the mill percentages fell (covering that fourth of the mill percentages falling immediately below or above the median) is shown for each occupation in the accompanying tables.

1/ Prepared by Joseph W. Bloch.

2/ Or average hourly earnings in the case of workers paid according to output. Premium pay for overtime or night work was excluded from these data.

3/ Copies of the job descriptions used to classify workers are available upon request (Job Descriptions for Wage Studies: Textiles - Appendix L).

4/ To assure comparability among mills in the occupation used as a base, it was necessary to exclude those mills in which all loom fixers were paid on an incentive basis. The choice of loom fixers for the base occupation represents a departure from the methods used in studies dealing with other textile industries, where one or more unskilled jobs were taken as a mill base from which to measure differentials. No suitable unskilled job or combination of jobs in woolen and worsted mills were found in as many mills as were loom fixers. The choice of base does not, however, affect the validity of the results so far as the woolen and worsted industry is concerned, nor does it hamper justifiable comparisons of job differentials among the major textile fields (see footnote 6).

OCCUPATIONAL WAGE RELATIONSHIPS

This study is based upon the wage practices of 162 mills producing woollen or worsted cloth or other woven goods. 5/ Of these mills, 136 were engaged in both spinning and weaving (integrated mills) and 26 were engaged in weaving only (weaving mills). Mills performing only spinning operations were excluded from this study. Each of the 162 mills employed more than 50 workers. Other characteristics of the mills covered are summarized in table 1.

General Wage Pattern

The average wage scale for woollen and worsted cloth mills showed men loom fixers (other than Jacquard) as the highest-ranking group among workers paid on a time basis (table 2 and chart 1). Lowest among the occupations covered were women twister tenders, doffers, and hand truckers, whose hourly rates in the average mill amounted to 60 percent of the pay for loom fixers. Stated in another way, the wage rates for loom fixers were approximately 167 percent of the rates for the lowest-ranking jobs. 6/

5/ This report utilizes the extensive wage data obtained through a survey of representative mills conducted under the direction of the Bureau's regional wage analysts. Another bulletin, "Wage Structure: Woolens and Worsted Textiles, 1946" describes the wage structure of the industry in terms of actual average hourly earnings. For this study of wage relationships, spinning mills were excluded, as were cloth mills with fewer than 51 workers and those that either paid all loom fixers on an incentive basis or employed no full-time loom fixers. Aside from the difference in coverage, the relationships indicated in the present study will not necessarily coincide with the relationships implicit in the average hourly earnings data presented in the Wage Structure bulletin because the two studies differ significantly in purpose and method.

6/ The relationships between the selected occupations and loom fixers presented in the accompanying tables can be converted to another base (and the differential between any 2 occupations can be computed) by using the figures shown as absolute numbers. In table 1, for example, relationships to men janitors can be determined by using the median percentage 63 as a base or 100 (that is, multiplying the percentages shown for each occupation by 100/63). The average wage advantage of men dresser tenders over men card tenders (both on a time basis) was approximately 28 percent (86/67). While not rigorously precise, this method of conversion is sufficiently reliable to serve most purposes.

Workers paid according to output ranked substantially higher in the wage scale than workers performing similar tasks on a time basis. The relative advantage of incentive workers over time workers ranged from 13 percent for women twister tenders to 23 percent for men wool sorters.

The status of men in the average wage scale was, on the whole, higher than women in comparable jobs. Men dresser tenders and cloth inspectors held a substantial advantage over women in the same jobs, but in so important an occupation as weaving men and women occupied identical positions in the average wage scale. Among the other jobs for which both men and women were employed the advantage in position held by the former was comparatively slight.

WAGE RELATIONSHIPS BY TYPE OF MILL, REGION, UNIONIZATION AND SIZE OF MILL

In the framework of the wage patterns characteristic of woolen and worsted cloth mills, considered separately, loom fixers were in a slightly better position in the latter than in the former type of mill. That is, the wage spread between loom fixers and most occupations was larger in worsted than in woolen cloth mills. This factor accounts for much of the differences between woolen mills and worsted mills in the figures shown in table 3. There were, however, some exceptional differences as between the two types of mills in the relative positions of certain occupations. Men and women weavers, women ring frame spinners, and women yarn winders, on an incentive pay basis, occupied substantially higher positions in the wage scales for woolen than for worsted mills. On the other hand, most of the dyeing and finishing occupations were in somewhat better wage positions in worsted than in woolen mills.

New England mills employ over three-fifths of the workers in the industry as a whole. The Middle Atlantic region ranks second in importance, with over one-fifth of the industry's total employment. The average wage scales for cloth mills in these regions, presented in table 4, reveal some marked differences in the relationships among occupations. Weavers, particularly those on box looms, occupied lower positions in Middle Atlantic than in New England mills, but skilled maintenance occupations and men dresser tenders (on time rates) were placed higher in Middle Atlantic than in New England scales. 7/

7/ On the basis of comparisons between average hourly earnings in April 1946 and those shown by earlier wage surveys prepared by the Bureau of Labor Statistics for the woolen and worsted industry it appears that job differentials, in terms of cents-per-hour, had widened in New England mills between 1938 and 1946. In percentage terms, however, the wage spread between the skilled and the unskilled groups had narrowed. Most of the change occurred between 1938 and 1943. A general widening of cents-per-hour differentials and a narrowing of percentage differentials were also noted for Middle Atlantic mills.

The average wage pattern for union mills differed from that for nonunion mills in many respects, since few occupations were in exactly the same position in both scales (table 5). On the whole, however, the two wage patterns did not differ significantly in terms of spread between broad skill levels.

Except for a few occupations that differed substantially in relative positions, the major part of the differences between the figures shown for large and small mills in table 6 can be accounted for by reference to the position of loom fixers in the two groups of mills. Loom fixers were rated somewhat higher in large than in small mills, hence the percentage figures shown for each occupation would tend to be larger in the latter group. Individual occupations did not hold precisely the same position with respect to other occupations in both wage patterns, but their approximate positions revealed no appreciable difference between large and small mills in spread between broad skill levels.

Table 1.--CHARACTERISTICS OF WOOLEN AND WORSTED CLOTH MILLS SELECTED FOR
WAGE RELATIONSHIP STUDY, 1946

Item	Number of mills producing 1/ -		
	All mills	Woolen cloth	Worsted cloth
Total mills	162	117	45
<u>Location</u>			
New England	93	65	28
Middle Atlantic	30	18	12
Other regions <u>2/</u>	39	34	5
<u>Operations</u>			
Integrated mills	136	112	24
Weaving mills	26	5	21
<u>Size of mill</u>			
More than 250 employees ...	67	42	25
51 - 250 employees.....	95	75	20
<u>Unionization</u>			
Union mills	65	46	19
Nonunion mills	97	71	26

1/ Mills were classified on the basis of principal product

2/ Includes Border States, Southeast, Great Lakes, and Pacific regions.

Table 2.—OCCUPATIONAL WAGE RATES ^{1/} IN WOOLEN AND WORSTED CLOTH MILLS AS PERCENTAGES OF TIME RATES FOR MEN
LOOM FIXERS ^{2/}, BY SEX AND METHOD OF WAGE PAYMENT, APRIL 1946

Occupation and method of wage payment ^{3/}	Men			Women ^{4/}		
	Percent of time rates			Percent of time rates		
	Number:	for men loom fixers		Number:	for men loom fixers	
	of	Middle range	of	of	Middle range	of
	mills	within which	mills	mills	within which	mills
		half of the			half of the	
		mills fell			mills fell	
Maintenance						
Card grinders, T.....	21	77	71- 81	-	-	-
Carpenters, T.....	75	86	80- 93	-	-	-
Electricians, T.....	61	90	83- 99	-	-	-
Machinists, T.....	52	94	86-102	-	-	-
Maintenance men, general utility, T....	66	81	73- 91	-	-	-
Mechanics, T.....	64	86	80- 94	-	-	-
Supervision						
Second hands, T.....	134	92	84- 99	-	-	-
Yarn preparation						
Card tenders, T.....	113	67	63- 72	39	65	61- 70
Doffers, spinning frames, T.....	(6/)	(6/)	(6/)	21	60	57- 62
Dresser tenders, T.....	118	86	81- 91	22	76	62- 81
Dresser tenders, Inc.	16	101	95-111	-	-	-
Sorters, wool, T.....	19	81	72- 83	-	-	-
Sorters, wool, Inc.	13	100	93-113	-	-	-
Spinners, mule, T.....	23	82	78- 86	-	-	-
Spinners, mule, Inc.	83	96	91-104	28	92	83- 94
Spinners, ring frame, T.....	14	65	60- 73	42	62	58- 67
Spinners, ring frame, Inc.	16	77	70- 86	47	75	69- 81
Twister tenders, T.....	(6/)	(6/)	(6/)	25	60	53- 63
Twister tenders, Inc.	(6/)	(6/)	(6/)	15	68	62- 77
Winders, yarn, T.....	19	62	61- 67	94	61	55- 66
Winders, yarn, Inc.	(6/)	(6/)	(6/)	86	71	67- 78
Weaving						
Loom fixers, other than Jacquard, T....	162	100	(7/)	-	-	-
Weavers, other than Jacquard						
Automatic plain looms, Inc.	78	96	90-102	54	96	90-103
Box looms, Inc.	40	91	82- 94	33	91	80- 96
Other ^{5/} , Inc.	52	92	87-102	51	39	82- 96
Dyeing and finishing						
Dry-cans operators, T.....	53	67	64- 71	-	-	-
Dyeing-machine tenders, cloth, T.....	55	68	65- 71	-	-	-
Dyeing-machine tenders, raw stock, T....	55	67	63- 74	-	-	-
Fuller tenders, T.....	89	70	66- 77	-	-	-
Mangle tenders, T.....	51	67	62- 70	-	-	-
Shearing-machine operators, T.....	86	71	67- 75	-	-	-
Tenter-frame tenders, T.....	35	67	65- 73	-	-	-
Washer tenders, cloth, T.....	97	69	65- 74	-	-	-
Winders, cloth, bolts or tubes, T.....	63	69	64- 73	-	-	-
Other						
Inspectors, cloth, hand, T.....	112	74	69- 79	75	64	58- 69
Janitors, T.....	62	63	59- 67	25	61	57- 66
Stock clerks, T.....	46	71	63- 80	-	-	-
Truckers, hand, T.....	99	64	61- 68	15	60	59- 62
Watchmen, T.....	119	63	59- 69	-	-	-

^{1/} Straight-time hourly earnings (excluding premium pay for overtime and night work).

^{2/} Does not include Jacquard loom fixers.

^{3/} T = time; Inc. = incentive.

^{4/} Data are shown only for those occupations in which women were employed in a sufficient number of mills to justify comparisons.

^{5/} Includes weavers in mills for which the types of looms operated were not designated.

^{6/} Number of mills too small to justify comparison.

^{7/} The rate for loom fixers was taken as 100 in each mill covered.



Table 3.--OCCUPATIONAL WAGE RATES ^{1/} IN WOOLEN AND WORSTED CLOTH MILLS AS PERCENTAGES OF TIME RATES FOR MEN
LOOM FIXERS ^{2/}, BY TYPE OF MILL, APRIL 1946

Occupation, sex, and method of wage payment ^{3/}	Woolen mills			Worsted mills		
	Percent of time rates			Percent of time rates		
	for men loom fixers			for men loom fixers		
	Number of mills	Average	Middle range within which half of the mills fell	Number of mills	Average	Middle range within which half of the mills fell
<u>Men</u>						
<u>Maintenance</u>						
Card grinders, T.....	14	78	76- 81	(^{4/})	(^{4/})	(^{4/})
Carpenters, T.....	54	86	72- 94	21	86	82- 88
Electricians, T.....	42	91	82-100	13	90	84- 94
Machinists, T.....	33	95	87-103	19	93	84- 94
Maintenance men, general utility, T....	53	83	71- 93	13	73	71- 76
Mechanics, T.....	47	85	80- 95	17	86	81- 87
<u>Supervision</u>						
Second hands, T.....	163	92	86- 99	31	87	82- 94
<u>Yarn preparation</u>						
Card tenders, T.....	102	67	63- 72	11	64	62- 71
Dresser tenders, T.....	83	87	80- 92	30	85	81- 90
Dresser tenders, Inc.....	12	103	78-111	(^{4/})	(^{4/})	(^{4/})
Sorters, wool, T.....	16	81	72- 87	(^{4/})	(^{4/})	(^{4/})
Spinners, mule, T.....	19	82	79- 86	(^{4/})	(^{4/})	(^{4/})
Spinners, mule, Inc.....	79	86	81-104	(^{4/})	(^{4/})	(^{4/})
Spinners, ring frame, Inc.....	14	75	64- 86	(^{4/})	(^{4/})	(^{4/})
Winders, yarn, T.....	(^{4/})	(^{4/})	(^{4/})	14	63	60- 67
<u>Weaving</u>						
Loom fixers, other than Jacquard, T....	117	100	(^{5/})	45	100	(^{5/})
Weavers, other than Jacquard						
Automatic plain looms, Inc.....	47	99	93-104	31	91	88- 96
Box looms, Inc.....	31	92	86- 94	(^{4/})	(^{4/})	(^{4/})
Other ^{6/} , Inc.....	41	93	87-102	11	99	88- 96
<u>Dyeing and finishing</u>						
Dry-cans operators, T.....	43	68	60- 71	10	65	63- 67
Dyeing-machine tenders, cloth, T.....	41	67	62- 71	14	71	68- 73
Dyeing-machine tenders, raw stock, T...	44	67	62- 74	11	66	64- 70
Fuller tenders, T.....	71	70	66- 78	18	69	65- 72
Mangle tenders, T.....	34	67	61- 70	17	68	65- 75
Shearing-machine operators, T.....	62	71	67- 76	24	72	69- 76
Tenter-frame tenders, T.....	25	67	63- 74	10	68	65- 73
Washer tenders, cloth, T.....	72	70	65- 74	25	66	65- 70
Winders, cloth, belts or tubes, T.....	41	69	63- 73	22	68	64- 75
<u>Other</u>						
Inspectors, cloth, hand, T.....	76	73	68- 81	36	75	72- 78
Janitors, T.....	41	63	60- 68	21	60	57- 64
Stock clerks, T.....	36	71	62- 80	10	69	65- 73
Truckers, hand, T.....	73	65	61- 69	26	62	60- 67
Watchmen, T.....	83	65	59- 70	36	61	58- 65
<u>Women</u>						
<u>Yarn preparation</u>						
Card tenders, T.....	39	65	61- 70	(^{4/})	(^{4/})	(^{4/})
Doffers spinning frames, T.....	(^{4/})	(^{4/})	(^{4/})	13	58	56- 60
Dresser tenders, T.....	15	79	74- 83	(^{4/})	(^{4/})	(^{4/})
Spinners, mule, Inc.....	26	92	83- 91	(^{4/})	(^{4/})	(^{4/})
Spinners, ring frames, T.....	29	64	58- 72	13	61	58- 63
Spinners, ring frames, Inc.....	36	78	70- 82	11	69	68- 73
Twister tenders, T.....	14	60	57- 69	11	60	58- 62
Twister tenders, Inc.....	(^{4/})	(^{4/})	(^{4/})	10	68	62- 72
Winders, yarn, T.....	62	62	56- 68	32	59	54- 61
Winders, yarn, Inc.....	65	74	68- 79	21	68	63- 75
<u>Weaving</u>						
Weavers, other than Jacquard						
Automatic plain looms, Inc.....	41	97	91-104	13	86	81- 96
Box looms, Inc.....	27	92	82- 96	(^{4/})	(^{4/})	(^{4/})
Other ^{6/} , Inc.....	43	89	83- 98	(^{4/})	(^{4/})	(^{4/})
<u>Other</u>						
Inspectors, cloth, hand, T.....	58	66	58- 69	17	62	60- 67
Janitors, T.....	18	63	58- 67	(^{4/})	(^{4/})	(^{4/})

^{1/} Straight-time hourly earnings (excluding premium pay for overtime and night work).

^{2/} Does not include Jacquard loom fixers.

^{3/} T- time; Inc. - Incentive.

^{4/} Number of mills too small to justify comparisons.

^{5/} The rate for loom fixers was taken as 100 in each mill covered.

^{6/} Includes weavers in mills for which the types of looms operated were not designated.

Table 4.--OCCUPATIONAL WAGE RATES 1/ IN WOOLEN AND WORSTED CLOTH MILLS AS PERCENTAGES OF TIME RATES FOR MEN
LOOM FIXERS 2/, BY SELECTED REGIONS, APRIL 1946

Occupation, sex, and method of wage payment <u>3/</u>	New England			Middle Atlantic		
	Percent of time rates			Percent of time rates		
	for men loom fixers			for men loom fixers		
	Number of mills	Average	Middle range within which half of the mills fell	Number of mills	Average	Middle range within which half of the mills fell
<u>Men</u>						
<u>Maintenance</u>						
Card grinders, T.....	13	76	71- 77	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
Carpenters, T.....	51	84	79- 88	11	93	87- 95
Electricians, T.....	38	88	80- 94	11	97	90-100
Machinists, T.....	35	94	87- 98	9	95	86-100
Maintenance men, general utility, T....	40	76	71- 85	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
Mechanics, T.....	39	83	77- 88	11	90	89- 94
<u>Supervision</u>						
Second hands, T.....	81	90	83- 95	21	98	90-105
<u>Yarn preparation</u>						
Card tenders, T.....	68	64	62- 68	16	68	63- 72
Dresser tenders, T.....	68	86	82- 89	23	91	85- 94
Dresser tenders, Inc.....	13	101	94-118	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
Spinners, mule, Inc.....	61	97	91-107	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
Winders, yarn, T.....	11	64	61- 66	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
<u>Weaving</u>						
Loom fixers, other than Jacquard, T....	93	100	(<u>5/</u>)	30	100	(<u>5/</u>)
Weavers, other than Jacquard						
Automatic plain looms, Inc.....	68	97	90-102	10	91	86- 95
Box looms, Inc.....	29	92	88- 95	11	74	72- 82
Other <u>6/</u> , Inc.....	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)	16	88	84- 90
<u>Dyeing and finishing</u>						
Dry-cans operators, T.....	36	66	63- 69	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
Dyeing-machins tenders, cloth T.....	41	67	63- 70	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
Dyeing-machins tenders, raw stock T....	29	66	61- 70	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
Fuller tenders, T.....	55	69	66- 72	11	66	65- 67
Mangle tenders, T.....	37	68	62- 69	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
Shearing-machine operators, T.....	58	70	65- 73	10	76	75- 76
Tenter-frame tenders, T.....	26	67	63- 73	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
Washer tenders, cloth, T.....	64	67	64- 72	12	67	65- 74
Winders, cloth, bolts or tubes, T.....	49	67	63- 73	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
<u>Other</u>						
Inspectors, cloth, hand, T.....	73	73	69- 78	18	75	72- 79
Jenitors, T.....	29	60	57- 63	9	63	57- 68
Stock clerks, T.....	26	72	64- 76	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
Truckers, hand, T.....	62	64	61- 68	17	62	61- 70
Watchmen, T.....	64	61	58- 66	19	60	54- 68
<u>Women</u>						
<u>Yarn preparation</u>						
Card tenders, T.....	29	65	61- 67	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
Doffers, spinning frame, T.....	11	60	58- 61	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
Spinners, ring frame, T.....	22	61	58- 64	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
Spinners, ring frame, Inc.....	29	73	68- 81	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
Twister tenders, T.....	11	60	58- 62	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
Twister tenders, Inc.....	10	68	62- 72	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
Winders, yarn, T.....	47	61	55- 64	25	56	52- 63
Winders, yarn, Inc.....	57	71	65- 77	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
<u>Weaving</u>						
Weavers, other than Jacquard						
Automatic plain looms, Inc.....	45	96	91-103	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)
Box looms, Inc.....	21	92	87- 95	12	76	72- 98
Other <u>6/</u> , Inc.....	(<u>4/</u>)	(<u>4/</u>)	(<u>4/</u>)	12	84	79- 91
<u>Other</u>						
Inspectors, cloth, hand, T.....	35	63	58- 67	17	62	55- 66

1/ Straight-time hourly earnings (excluding premium pay for overtime and night work).

2/ Does not include Jacquard loom fixers.

3/ T = time; Inc. = Incentive.

4/ Number of mills too small to justify comparisons.

5/ The rate for loom fixers was taken as 100 in each mill covered.

6/ Includes weavers in mills for which the types of looms operated were not designated.

Table 5.--OCCUPATIONAL WAGE RATES ^{1/} IN WOOLEN AND WORSTED CLOTH MILLS AS PERCENTAGES OF TIME RATES FOR MEN
LOOM FIXERS ^{2/}, BY UNIONIZATION, APRIL 1946

Occupation, sex, and method of wage payment ^{3/}	Union mills			Nonunion mills		
	Percent of time rates:			Percent of time rates		
	for men loom fixers			for men loom fixers		
	Number of mills	Average	Middle range within which half of the mills fell	Number of mills	Average	Middle range within which half of the mills fell
<u>Men</u>						
<u>Maintenance</u>						
Card grinders, T	10	76	71- 80	11	77	73- 86
Carpenters, T	33	87	82- 94	42	85	78- 92
Electricians, T	26	91	85-100	35	88	83- 95
Machinists, T	26	94	86-102	26	95	84-102
Maintenance men, general utility, T ...	23	83	71- 92	43	81	73- 86
Mechanics, T	27	84	81- 94	37	86	80- 94
<u>Supervision</u>						
Second hands, T	54	92	83- 98	80	92	84- 99
<u>Yarn preparation</u>						
Card tenders, T	44	66	63- 72	69	67	62- 71
Dresser tenders, T	49	85	81- 89	69	87	80- 93
Spinners, mule, Inc.	33	96	91-101	50	97	90-109
<u>Weaving</u>						
Loom fixers, other than Jacquard, T ...	65	100	(4/)	97	100	(4/)
Weavers, other than Jacquard						
Automatic plain looms, Inc.	30	96	90- 98	48	97	90-104
Box looms, Inc.	13	88	80- 94	27	92	83- 94
Other ^{5/} , Inc.	29	93	85-102	23	90	88-102
<u>Dyeing and finishing</u>						
Dry-can operators, T	27	67	65- 70	26	68	63- 74
Dyeing-machine tenders, cloth, T	21	68	65- 70	34	68	64- 74
Dyeing-machine tenders, raw stock, T ...	22	68	61- 75	33	66	63- 71
Fuller tenders, T	41	70	66- 78	48	70	66- 75
Mangle tenders, T	25	67	65- 69	26	69	61- 78
Shearing-machine operators, T	39	72	69- 75	47	71	65- 76
Tenter-frame tenders, T	12	66	65- 67	23	69	65- 73
Washer tenders, cloth, T	44	67	65- 72	53	69	65- 74
Winders, cloth, bolts or tubes, T	29	66	64- 73	34	69	62- 74
<u>Other</u>						
Inspectors, cloth, hand, T	47	73	70- 78	65	75	60- 80
Janitors, T	30	64	60- 68	32	62	57- 64
Stock clerks, T	20	69	64- 74	26	73	63- 81
Truckers, hand, T	35	63	61- 65	64	66	61- 70
Watchmen, T	50	67	59- 69	69	62	57- 69
<u>Women</u>						
<u>Yarn preparation</u>						
Card tenders, T	17	65	63- 71	22	63	60- 69
Doffers, spinning frames, T	11	60	56- 62	10	60	58- 61
Dresser tenders, T	11	77	75- 79	11	72	66- 80
Spinners, mule, Inc.	12	94	87- 94	16	91	83- 93
Spinners, ring frame, T	22	62	57- 70	20	64	61- 64
Spinners, ring frame, Inc.	21	79	70- 81	26	74	67- 78
Twister tenders, T	10	60	56- 69	15	60	58- 61
Winders, yarn, T	41	62	56- 68	53	61	55- 65
Winders, yarn, Inc.	38	74	67- 78	48	70	67- 78
<u>Weaving</u>						
Weavers, other than Jacquard						
Automatic plain looms, Inc.	19	93	87- 97	35	97	90-104
Box looms, Inc.	11	88	82- 92	22	92	79- 99
Other ^{5/} , Inc.	28	90	83- 96	23	88	83- 98
<u>Other</u>						
Inspectors, cloth, hand, T	30	66	58- 69	45	63	59- 69

^{1/} Straight-time hourly earnings (excluding premium pay for overtime and night work).

^{2/} Does not include Jacquard loom fixers.

^{3/} T = time; Inc. = incentive.

^{4/} The rate for loom fixers was taken as 100 in each mill covered.

^{5/} Includes weavers in mills for which the types of looms operated were not designated.

Table 6.--OCCUPATIONAL WAGE RATES 1/IN WOOLEN AND WORSTED CLOTH MILLS AS PERCENTAGES OF TIME RATES FOR MEN
LOOM FIXERS 2/, BY SIZE OF MILL, APRIL 1946

Occupation, sex, and method of wage payment <u>3</u> /	Mills with more than 250 workers			Mills with 51 - 250 workers		
	Percent of time rates			Percent of time rates		
	for men loom fixers			for men loom fixers		
	Number of mills	Average	Middle range within which half of the mills fell	Number of mills	Average	Middle range within which half of the mills fell
Men						
<u>Maintenance</u>						
Card grinders, T	16	77	71- 81	(4/)	(4/)	(4/)
Carpenters, T	47	84	79- 90	28	90	82- 94
Electricians, T	43	89	83- 95	18	94	85-106
Machinists, T	37	94	84- 96	15	103	95-110
Maintenance men, general utility, T ...	22	74	71- 78	44	85	74- 95
Mechanics, T	33	85	80- 95	31	87	81- 91
<u>Supervision</u>						
Second hands, T	62	91	83- 97	72	92	86- 99
<u>Yarn preparation</u>						
Card tenders, T	47	64	63- 68	66	69	63- 75
Dresser tenders, T	44	82	76- 86	74	88	83- 93
Dresser tenders, Inc.	12	101	94-104	(4/)	(4/)	(4/)
Spinners, mule, T	(4/)	(4/)	(4/)	15	84	82- 88
Spinners, mule, Inc.	34	97	90-101	49	96	92-109
Winders, Yarn, T	14	65	61- 69	(4/)	(4/)	(4/)
<u>Weaving</u>						
Loom fixers, other than Jacquard, T ...	67	100	(5/)	95	100	(5/)
Weavers, other than Jacquard						
Automatic plain looms, Inc.	36	96	90- 99	42	95	90-102
Box looms, Inc.	20	89	80- 94	20	92	86- 94
Other <u>6</u> /, Inc.	22	93	87-106	30	91	87- 97
<u>Dyeing and finishing</u>						
Dry-can operators, T	25	66	63- 69	28	69	66- 73
Dyeing-machine tenders, cloth, T	28	67	63- 70	27	69	67- 74
Dyeing-machine tenders, raw stock, T ...	31	67	63- 70	24	69	63- 76
Fuller tenders, T	45	68	65- 73	44	70	67- 78
Mangle tenders, T	27	67	62- 69	24	69	65- 70
Shearing-machine operators, T	45	70	66- 75	41	72	69- 77
Tenter-frame tenders, T	20	67	64- 71	15	69	66- 78
Washer-tenders, cloth, T	51	67	65- 71	46	70	65- 76
Winders, cloth, bolts or tubes, T	40	66	63- 72	23	70	66- 73
<u>Other</u>						
Inspectors, cloth, hand, T	59	73	69- 78	53	75	70- 79
Janitors, T	44	62	59- 65	18	65	58- 72
Stock clerks, T	26	67	62- 74	20	75	70- 83
Truckers, hand, T	49	63	61- 67	50	66	61- 70
Watchmen, T	57	62	59- 68	62	65	58- 73
Women						
<u>Yarn preparation</u>						
Card tenders, T	15	65	63- 70	24	65	61- 67
Doffers, spinning frames, T	15	58	56- 60	(4/)	(4/)	(4/)
Dresser tenders, T	13	72	66- 75	(4/)	(4/)	(4/)
Spinners, mule, Inc.	10	94	92- 94	18	86	81- 93
Spinners, ring frame, T	30	61	58- 64	12	70	64- 80
Spinners, ring frame, Inc.	24	74	69- 78	23	79	68- 84
Twister tenders, T	20	59	57- 62	(4/)	(4/)	(4/)
Twister tenders, Inc.	13	68	62- 77	(4/)	(4/)	(4/)
Winders, yarn, T	46	61	56- 65	48	61	54- 66
Winders, yarn, Inc.	41	74	65- 79	45	71	68- 77
<u>Weaving</u>						
Weavers, other than Jacquard						
Automatic plain looms, Inc.	24	96	87- 98	30	96	90-103
Box looms, Inc.	15	87	74- 94	18	93	82- 98
Other <u>6</u> /, Inc.	19	88	83- 94	32	89	83- 98
<u>Other</u>						
Inspectors, cloth, hand, T	38	65	58- 68	37	63	58- 69
Janitors, T	13	58	57- 63	12	63	58- 66

- 1/ Straight-time hourly earnings (excluding premium pay for overtime and night work).
- 2/ Does not include Jacquard loom fixers.
- 3/ T = time; Inc. = incentive.
- 4/ Number of mills too small to justify comparisons.
- 5/ The rate for loom fixers was taken as 100 in each mill covered.
- 6/ Includes weavers in mills for which the types of looms operated were not designated.

WAGE RELATIONSHIPS AMONG SELECTED OCCUPATIONS IN WOOLEN AND WORSTED CLOTH MILLS BY SEX AND METHOD OF WAGE PAYMENT APRIL 1946

TIME WORKERS

MEN

LOOM FIXERS, OTHER THAN JACQUARD 100
MACHINISTS, MAINTENANCE 94
SECOND HANDS 92
ELECTRICIANS, MAINTENANCE 90
MECHANICS, MAINTENANCE 86
CARPENTERS, MAINTENANCE 86
DRESSER TENDERS 86
SPINNERS, MULE 82
MAINTENANCE MEN, GENERAL UTILITY 81
SORTERS, WOOL 81
CARD GRINDERS 77
INSPECTORS, CLOTH, HAND 74
STOCK CLERKS 71
SHEARING-MACHINE OPERATORS 71
FULLER TENDERS 70
WASHER TENDERS, CLOTH 69
WINDERS, CLOTH, BOLTS OR TUBES 69
DYEING-MACHINE TENDERS, CLOTH 68
DYEING-MACHINE TENDERS, RAW STOCK 67
TENTER-FRAME TENDERS 67
MANGLE TENDERS 67
CARD TENDERS 67
DRY-CANS OPERATORS 67
SPINNERS, RING FRAME 65
TRUCKERS, HAND 64
WATCHMEN 63
JANITORS 63
WINDERS, YARN 62

WOMEN

DRESSER TENDERS 76
CARD TENDERS 65
INSPECTORS, CLOTH, HAND 64
SPINNERS, RING FRAME 62
JANITORS 61
WINDERS, YARN 61
TWISTER TENDERS 60
DOFFERS, SPINNING FRAME 60
TRUCKERS, HAND 60

INCENTIVE WORKERS

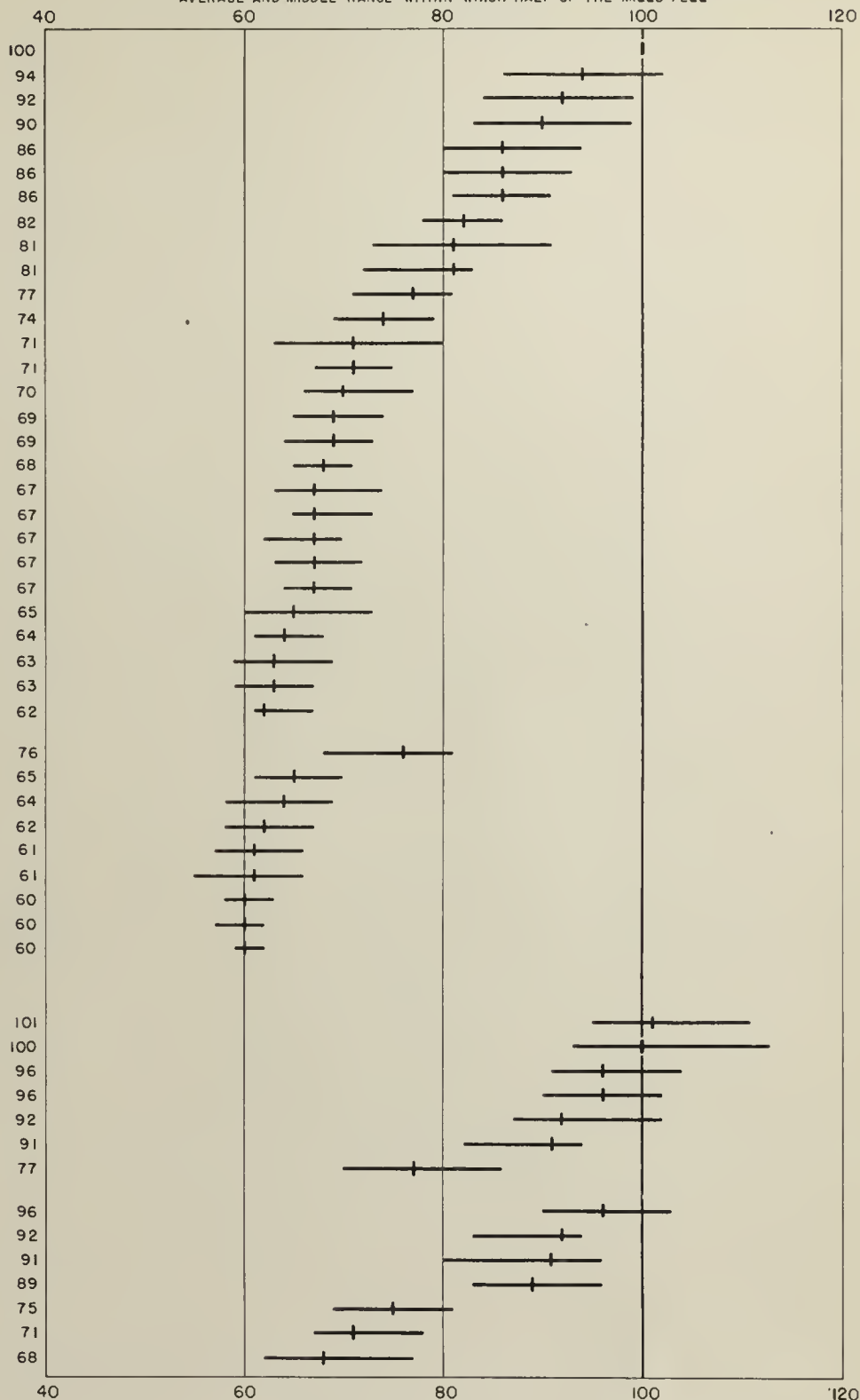
MEN

DRESSER TENDERS 101
SORTERS, WOOL 100
SPINNERS, MULE 96
WEAVERS, AUTOMATIC PLAIN LOOMS 96
WEAVERS, OTHER^{2/} 92
WEAVERS, BOX LOOMS 91
SPINNERS, RING FRAME 77

WOMEN

WEAVERS, AUTOMATIC PLAIN LOOMS 96
SPINNERS, MULE 92
WEAVERS, BOX LOOMS 91
WEAVERS, OTHER^{2/} 89
SPINNERS, RING FRAME 75
WINDERS, YARN 71
TWISTER TENDERS 68

OCCUPATIONAL WAGE RATES AS PERCENTAGES OF RATES FOR LOOM FIXERS^{1/}
AVERAGE AND MIDDLE RANGE WITHIN WHICH HALF OF THE MILLS FELL



INDUSTRY WAGE STUDIES BULLETINS

The following bulletins, issued as part of the Bureau's Industry Wage Studies Program, are available (in addition to local tabulations described in the Preface).

General

- A Descriptive Statement
- Job Descriptions for Wage Studies -
- Appendix A ... Metalworking
- B ... Mining
- C ... Apparel
- D ... Electric Light and Power; Warehousing and Storage
- E ... Structural Clay Products
- F ... Service Industries
- G ... Retail Trade
- H ... Footwear
- I ... Bakeries
- J ... Tobacco
- K ... Paper
- L ... Textiles
- M ... Chemicals
- N ... Furniture
- O ... Candy and Chocolates
- P ... Leather Tanning, Currying, and Finishing
- Q ... Meat Products
- R ... Gas Utilities
- S ... Wholesale Drugs

Series 1 - Occupational Wage Relationships

- No. 1 Machinery, 1945
- 2 Machine Tool Accessories, 1945
- 3 Foundries, 1945
- 4 Machine Tools, 1945
- 5 Electric Light and Power, 1945
- 6 Bakeries, 1945
- 7 Wood Furniture
- 8 Rayon and Silk Textiles, 1946
- 9 Cotton Textiles, 1946
- 10 Textile Dyeing and Finishing, 1946
- 11 Woolen and Worsted Textiles, 1946

Series 2 - Wage Structure

- | | |
|---|---|
| No. 1 Machinery, 1945 | No. 29 Women's and Misses' Dresses, 1945 |
| 2 Machine Tool Accessories, 1945 | 30 Wood Furniture, 1945 |
| 3 Machine Tools, 1945 | 31 Jewelry, 1946 |
| 4 Electroplating and Polishing, 1945 | 32 Hosiery, 1946 |
| 5 Fabricated Structural Steel, 1945 | 33 Paperboard Containers and Boxes, 1945 |
| 6 Iron and Steel Forgings, 1945 | 34 Pulp, Paper, and Paperboard Mills, 1945 |
| 7 Sheet Metal, 1945 | 35 Copper Alloying, Rolling, and Drawing, 1946 |
| 8 Foundries, 1945 | 36 Soap and Glycerin, 1946 |
| 9 Small Arms, 1945 | 37 Cotton Textiles, 1946 |
| 10 Aircraft Engines and Parts, 1945 | 38 Paints, Varnishes, and Lacquers, 1946 |
| 11 Power Boilers, 1945 | 39 General Automobile Repair Shops, 1946 |
| 12 Bituminous Coal Mines, 1945 | 40 Woolen and Worsted Textiles, 1946 |
| 13 Office Workers, Metalworking, 1945 | 41 Rayon and Silk Textiles, 1946 |
| 14 Electric Generating and Distribution Equipment, 1945 | 42 Drugs and Medicines, 1946 |
| 15 Cotton Garments, 1945 | 43 Perfumes and Cosmetics, 1946 |
| 16 Structural Clay Products, 1945 | 44 Textile Dyeing and Finishing, 1946 |
| 17 Military Tanks, 1945 | 45 Women's and Misses' Coats and Suits, 1946 |
| 18 Power Laundries, 1945 | 46 Heating Apparatus, 1946 |
| 19 Radios, 1945 | 47 Sawmilling, 1946 |
| 20 Electric Light and Power, 1945 | 48 Knitwear, 1946 |
| 21 Limited Price Variety Stores, 1945 | 49 Foundries, 1946 |
| 22 Bakeries, 1945 | 50 Women's and Misses' Blouses and Waists, 1947 |
| 23 Footwear, 1945 | 51 Machinery, 1946 |
| 24 Warehousing and Storage, 1945 | 52 Metal Furniture, 1947 |
| 25 Industrial Chemicals, 1946 | 53 Glassware Industry, 1947 |
| 26 Department and Clothing Stores, 1945 | 54 Gas Utilities, 1947 |
| 27 Cigars, 1946 | |
| 28 Tobacco Products, other than Cigars, 1945 | |

